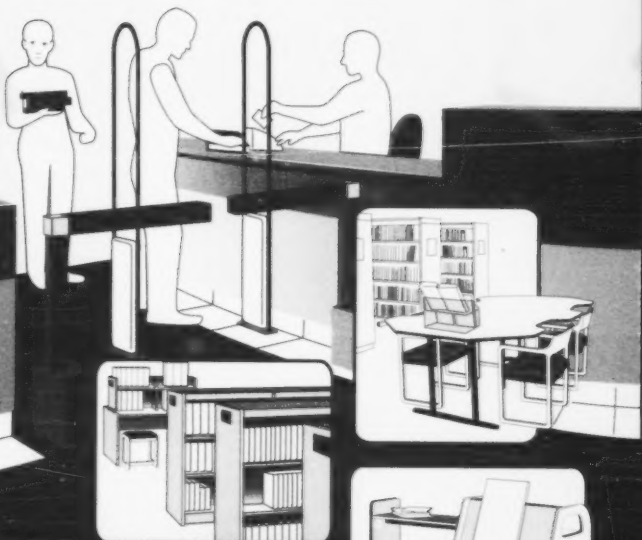


Health and Safety Guide for Libraries

check out



Prepared by the Canadian Centre
for Occupational Health and Safety



Emergency Information

Ambulance

Fire

Police

Poison Control Centre

Doctor

Company Emergency Phone Number



Canadian Centre for Occupational Health and Safety

135 Hunter Street East, Hamilton Ontario Canada L8N 1M5

104-06376/

Health and Safety Guide for Libraries

First Edition



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Personal Information

This handbook belongs to:

Name _____

Company _____

Position _____

Address _____

Telephone _____

Doctor _____

Telephone _____

Allergies _____

Medical Conditions

In case of emergency please notify:

Name _____

Relation _____

Address _____

Telephone _____

Health and Safety Guide for Libraries

Objectives

This is your guide to working safely in libraries and other information centres. This guide will enable you to:

- 1 Recognize workplace hazards.
- 1 Prevent accident and injury through safe work practices and use of personal protective equipment.
- 1 Respond to accidents and emergencies.
- 1 Understand your duties and rights as given in occupational health and safety legislation.
- 1 Contact government departments to find additional health and safety information.

Scope

This guide provides basic knowledge and skills for ensuring a healthy and safe workplace. It presents a step-by-step approach for dealing with workplace health and safety problems, namely:

- 1 Recognize potential problems relating to library work.
- 1 Evaluate risk.
- 1 Develop and implement controls.
- 1 Evaluate effectiveness of controls.
- 1 Identify sources of health and safety information.

Details of measurement techniques and exposure evaluation are beyond the scope of this guide. Such information is available from the Inquiries Service of the Canadian Centre for Occupational Health and Safety (CCOHS). For detailed hazard evaluation and implementation of control measures, a specialist should be consulted.

Target Audience

This guide is for persons employed in different library departments including:

- I administration,
- I lending services,
- I cataloging,
- I information services,
- I photocopying,
- I shelving, and
- I audiovisual services.
- I housekeeping
- I maintenance

Summary

People employed in libraries do a wide range of automated and manual jobs. In large libraries these jobs may be assigned to one person or a group of persons. In smaller libraries the same person may do several different tasks. Library work has a number of health and safety hazards. These hazards include psychological stress, risk of slips, trips and falls, back injury, personal safety concerns, inadequate workstations, inadequate lighting, dusts, moulds and poor indoor air quality.

The guide provides an overview on the methods of recognition, evaluation and control of hazards in libraries. Basic components of a health and safety program are outlined.

Health and safety issues related to library work

Symptoms	Potential causes	Prevention
Pain and numbness in hands, wrist, shoulders and neck. Back pain and stiffness.	Handling books and boxes that require: Working in awkward posture. Pushing and pulling carts. Lifting and transferring heavy objects. Repetitive work.	Adequately designed and adjustable work stations. Ergonomically adequate equipment design. Ergonomically designed carts. (DO NOT OVERLOAD) Ergonomically adequate job design. Training in proper work practice.
Drowsiness. Sore eyes. Burning eyes. Fatigue. Dry eyes. Stuffy nose. Headache. Sneezing. Nervousness.	Indoor air quality, air contaminants. Temperature, relative humidity. Moulds and fungi growth in warm and humid areas.	Adequate ventilation and air-conditioning. Good housekeeping, and maintenance of ventilation system. Timely cleaning of moulds and fungi from all possible locations, such as walls, ceiling, windows, floors, carpets and books.
Burning eyes. Tearing. Skin sensitization.	Emissions of volatile organic compounds from furniture, carpeting, fabrics, paints and cleaners.	Adequate ventilation.

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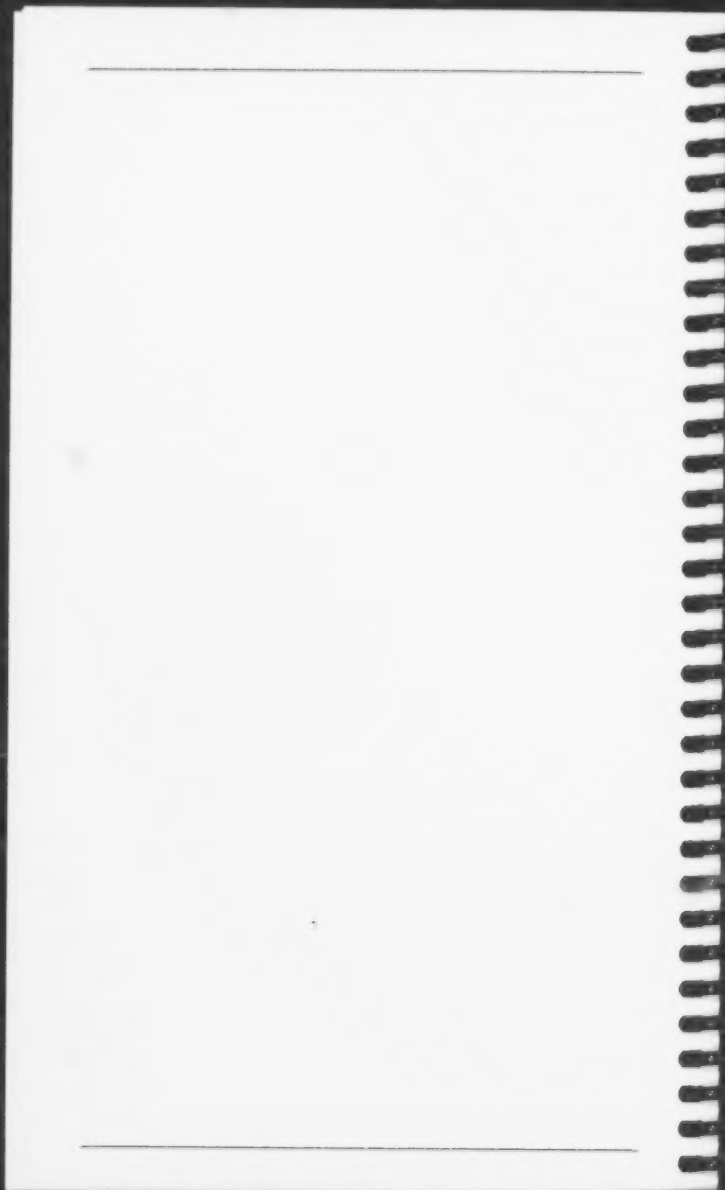
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Section I

Basic Rules of Safety

- 1. The Law Says...**
- 2. Elements of On-the-Job Safety**
- 3. Safety Tips for New Library Employees**
- 4. Safety Tips for Supervisors**

1. The Law Says...

Health and safety legislation promotes an internal responsibility system. Everyone in the workplace has responsibility for maintaining a healthy and safe workplace.

Employers must provide a safe and healthy workplace. Supervisors are responsible for making sure that work is done safely.

Working safely is the worker's responsibility. Employees must follow safety procedures established by the employer.

If an employee believes that a task is dangerous, he/she has the right to refuse to do that task until it can be done safely. Employees must report to his/her supervisor his/her intention to refuse dangerous work.

2. Elements of On-the-Job Safety

1. The right way of doing your job is the safe way. Follow instructions. If you don't know, ask.
2. Know potential hazards in your work, and ways of working safely to prevent such hazards.
3. Know safety rules for specific jobs and be able to explain these rules to fellow workers.
4. Follow emergency procedures in case of fire, medical and other emergencies.
5. Report all injuries, including minor scratches, cuts, burns, slips and falls. Your employer needs this information to take corrective action to prevent future injuries. Follow your library's procedures for reporting accidents and injuries.
6. Know the location of emergency equipment such as fire extinguishers and understand how to use this equipment.
7. Use personal protective equipment as required by your employer.

-
8. Learn special safety procedures for particular circumstances associated with library work. These may include ergonomic concerns, indoor air quality, psychosocial stress and security issues.
 9. Follow electrical safety rules when using electrical equipment, grounding portable electrical tools and working near electrical fuse and panel boxes.
 10. Perform regular circle checks on vehicles such as bookmobiles to ensure good operating condition.
 11. Report unsafe practices and unsafe conditions to your employer.
 12. Wear clothing that is appropriate to the tasks you perform. Wear comfortable shoes at a public service station that requires significant standing or assisting users in locating material from library shelves.
 13. Off-the-Job safety is equally important. Safety does not stop when you leave your workplace.

3. Safety Tips for New Library Employees

When you are starting a new job, ask your supervisor/ employer the following health and safety related questions.

- ❑ What are the potential hazards of the job?
- ❑ What training and education are available on health and safety rules and responsibilities?
- ❑ What are my responsibilities regarding health and safety?
- ❑ If I notice something wrong, to whom and how should I report?
- ❑ Are there written safe work practices?
- ❑ Do I need to use any personal protective equipment such as a respirator?
- ❑ What do I do in case of fire or other emergencies?

-
- | Where do I find fire extinguishers, first aid kits, first aid rooms and emergency assistance?
 - | Who is responsible for answering safety related questions?
 - | What do I do if I get injured on the job or have an accident?

4. Safety Tips for Supervisors

- | Explain the importance of safety to employees.
- | Refresh and update safety rules to employees.
- | Implement safe work practices and ensure that employees follow these practices.
- | Give praise for safe behaviour.
- | Encourage employee participation in hazard recognition and development of safe work practices.
- | Reward participation.
- | Set an example.
- | Promote safety by providing staff with books, videos, literature etc.
- | Visit library areas regularly.
- | Get to know your employees and listen to their concerns.
- | Continuously improve and simplify safety.

Section II

Monitoring Health and Safety in Your Library

- 1. Occupational Health and Safety (OHS)
Responsibilities in Your Library**
- 2. Workplace Inspection**
- 3. Accident Investigation**
- 4. First Aid**

1. Occupational Health and Safety (OHS) Responsibilities in Your Library

Sample

OHS Responsibilities in Your Library	
Library _____	Date _____
Expectation	Responsibility
Keep current with health and safety legislation	
Develop an OHS policy for the library	
Develop safe work procedures	
Take action on health and safety committee recommendations	
Provide OHS training and education	
Provide information regarding potential hazards	
Develop and implement ergonomic guidelines	
Report and respond to disruptive behaviour	
Provide first aid	
Monitor employee health	
Plan fire protection	
Conduct workplace inspections	
Conduct accident investigations	
Prepare records, statistics and reports	
Plan safety audits	
Ensure contractor safety	
Inspect and test the ventilation system, elevators, fire extinguishers, etc.	
Conduct emergency drills and develop an emergency evacuation plan	
Health and safety orientation for new and transferred employees	
Manage building security systems	
Monitor library air handling system	
Purchase equipment and supplies	
Do preventative maintenance	

2. Workplace Inspection

Purpose

The purpose of an inspection or safety tour is to identify unsafe conditions, as well as unsafe practices, and to recommend corrective actions. Occupational health and safety legislation requires regular workplace inspections.

Inspection Team

Inspection teams consist of a mix of personnel such as employees, supervisors and managers. Generally, the legislation sets out procedures for workplace inspections to be carried out by health and safety committees.

Roles and Responsibilities

Inspections are undertaken in accordance with a schedule agreed on by the Health and Safety Committee (a joint worker-management team that assists the employer in creating and maintaining a safe workplace). The inspection teams generally use a checklist as a guide for conducting inspections.

Inspection Reports

Inspection reports are communicated to all levels of the organization. Posting inspection reports on a bulletin board, reviewing them at joint health and safety committee meetings, and sending a copy to management for review are all good communication methods.

Library Inspection Checklist

Inspector(s) _____

Location/Department _____ Date _____

✓ **Satisfactory**

✗ **Unsatisfactory, requires attention**

Bulletin Boards & Signs

- ☐ Clean and readable?
- ☐ Material changed frequently?
- ☐ Information on safety rules, first aid, and health & safety committee information is posted?

Emergency Equipment

- ☐ Fire control equipment regularly tested?
- ☐ Fire control equipment appropriate for the type of fire it must control?
- ☐ Emergency lighting in place and regularly tested?

Furniture and Equipment

- ☐ Library shelves in good condition, stable and not overcrowded?
- ☐ Kick stools and stepladders safe and properly maintained?
- ☐ Library furniture safe?
- ☐ Chairs badly designed or worn?
- ☐ Sharp edges on desks or cabinets?

Work stations include:

- ☐ Adjustable chairs, desks?
- ☐ Glare free lighting?
- ☐ Adequate illumination?
- ☐ Free from noise?
- ☐ Adequate temperature?
- ☐ Materials within easy reach?
- ☐ Dangling or trailing cables

First Aid

- ☐ First aid kits accessible?
- ☐ Trained first aid providers available?
- ☐ Emergency procedures and phone numbers posted?
- ☐ All injuries reported?

Grounds & Library Entrances

- ☐ Sidewalk, steps and entrance to building are well maintained?
- ☐ Pedestrian traffic & employee parking areas are well lit?

Floors

- ☐ Loose material, debris, or worn carpeting?

Stairways and Aisles

- ☐ Clear and unblocked?
- ☐ Stairways well lit?
- ☐ Aisles marked & visible?
- ☐ Aisles are wide enough for wheelchairs and book trucks?
- ☐ Handrails and stair treads in good repair?

Lighting

- ☐ Light reflectors clean?
- ☐ Bulbs missing?
- ☐ Any areas dark?
- ☐ Is appropriate lighting used for specific library tasks?

- ❑ Work surfaces free from glare & shadows?
- ❑ Adequate window shades provided to control natural light?

Building

- Library building conforms to standards with respect to use, occupancy, building services and plumbing facilities?

Are the following structures built to ensure safety:

- ☐ Swing doors?
- ☐ Floor & wall openings?
- ☐ Ladders, stairways, & ramps?
- ☐ Guardrails?

Air Handling System

- ❑ Does air exchange rate meet required standards?
- ❑ Is the system free of sources of contamination?
- ❑ Humidity at acceptable level?
- ❑ Does ventilation control smoke & fumes?
- ❑ Provides thermal comfort, not too hot or too cold?

Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

WORKPLACE INSPECTION REPORT

Location: _____ Department/Area covered: _____
 Date of inspection: _____ Time of inspection: _____
 Copies to: _____ Inspected by: _____

Item (Location)	Hazards Observed	Repeat Item Yes/No	Priority A / B / C	Recommended Action	Responsible Person	Action Taken	Date

Analysis and comments:

Priority Codes: A = do immediately B = do within 3 days C = do within 2 weeks D = other

3. Accident Investigation

Purpose

The purpose of an accident investigation is to find the root cause of the accident and NOT to blame people for the accident. Accidents as well as incidents (close calls, or near misses) should be reported and investigated.

Investigation Team

The accident investigation team generally consists of the following:

1. Manager/supervisor.
2. Worker knowledgeable in the work process.
3. An expert (if appointed).
4. Health and safety committee representative(s).
5. Other persons as required.

Roles and Responsibilities

You must report any occurrence of an accident or an incident to your manager/supervisor immediately.

Your manager/supervisor is responsible for conducting the accident investigation and notifying the health and safety committee and other persons as required by legislation and your organization's procedures.

Report

The accident investigation report generally includes the following:

- 1 Name and occupation of the employee.
- 2 Location and time of accident and injury (if any).
- 3 Name(s) of witness(es).
- 4 Description of the tasks, including the equipment and working conditions.
- 5 Description of what happened to cause the accident.
- 6 Name of the person(s) completing the report.
- 7 Recommendations for corrective action.
- 8 Name of physician or surgeon, if any.

Sample

ACCIDENT REPORT FORM

Location

Date _____ Time _____

Reported by _____ Department _____

Location of the accident _____

Tasks being performed when accident occurred _____

Injuries

Names of persons affected _____

Nature of injury _____

Possible cause of injury _____

Equipment, tool, substance being used prior to accident _____

Property, Equipment Damage

Damaged items _____

Type of damage _____

How did the damage occur _____

Work Being Done When Accident Occurred

Description of work _____

Names of persons involved _____

Equipment(s) and tools used _____

Details (How accident occurred):

Sketch

4. First Aid

First aid regulations require that employers provide first aid facilities, equipment, and trained personnel in all workplaces. Persons who hold valid first aid certificates should make sure that the contents of first aid boxes are regularly checked and maintained.

For information regarding first aid kits and first aid training, please contact the local St. John Ambulance Association, the Canadian Red Cross Society or any other approved organization.

In case of injury or onset of a disease:

1. Promptly obtain first aid.
2. Notify your supervisor/employer.
3. Complete and promptly return all forms required for the workers compensation authority in your jurisdiction.
4. Your supervisor should decide on the need for an accident investigation.

First Aid Checklist

Does staff know how to report injuries on the job?	☐ Yes	☐ No
Are emergency phone numbers posted?	☐ Yes	☐ No
Are first aid kits available in each work area or floor?	☐ Yes	☐ No
Are first aid kits regularly inspected with supplies replenished as needed?	☐ Yes	☐ No
Are there employees who are qualified to provide first aid and are their names posted?	☐ Yes	☐ No
Is there a hospital, clinic or other medical care facility in the proximity of your workplace?	☐ Yes	☐ No
Does your employer offer or provide compensation for basic first aid or CPR training?	☐ Yes	☐ No
Do employees have a method of providing feedback about the first aid program?	☐ Yes	☐ No

Section III

The Library Work Environment

1. Indoor Air Quality (IAQ)
2. Formaldehyde
3. Solvents: Volatile Organic Compounds (VOCs)
4. Asbestos Health Effects
5. Dusts
6. Mould
7. Dust Mites
8. Sanitation/Housekeeping
9. Pests
10. Noise
11. Temperature and Humidity
12. Lighting
13. Radiation from VDTs
14. Fragrance Sensitivity

1. Indoor Air Quality (IAQ)

The indoor work environment of a library must be suitable to:

- I Meet the needs related to the comfort and well being of library workers and users.
- I Preserve the collections housed in the facility.
- I Suit the requirements of computer and telecommunications equipment.

For additional information refer to CSA Guideline Z204-94(R1999), Guideline for Managing Indoor Air Quality in Office Buildings.

Indoor Air Quality (IAQ) refers to the total indoor environment including:

- I air contaminants entering the building with the outdoor air intake by the ventilation system;
- I airborne biological contaminants produced inside the building such as mould, fungi, and substances from plants;
- I fibreglass or asbestos fibres, if these have been used in building construction;
- I formaldehyde from building materials such as plywood, particleboard and carpets;
- I volatile organic compounds produced by paints, adhesives, cosmetics, and cleaning products;
- I emissions from furniture, carpets, carpet glues, paints and varnishes, cleaning products, glues;
- I tobacco smoke, carbon dioxide in the exhaled air, body odours, perfumes from building occupants;
- I toxic gases, from computers, photocopiers and equipment;
- I indoor temperature, humidity, noise, lighting and air movement;
- I bacteria, viruses, moulds, dust mites, and so on, which grow or spread due to inadequate control of humidity or other environmental conditions.

Recognition and Control of Indoor Air Problems

As a starting point one must make sure that the ventilation is adequate. This is done by measuring carbon dioxide (CO₂) level in the air. Ventilation rates required to maintain low levels of CO₂ help improve the overall indoor air quality by dilution of indoor contaminants. Indoor CO₂ concentrations below 1000 ppm (parts per million) are generally accepted as an indicator of acceptable ventilation. Outdoor concentration of CO₂ is about 350 ppm.

Symptoms of Poor Indoor Air Quality

Health and comfort effects believed to arise from poor indoor air quality are commonly known as Sick Building Syndrome (SBS) and include headache, fatigue, dry throat, shortness of breath, skin irritation, dizziness, itchy eyes, bleeding nose, generally feeling unwell, or non-specific illness.

A wide variety of questionnaires are available for conducting employee response surveys to identify potential SBS problems.

Standard

ASHRAE Standard 62, "Ventilation for Acceptable Indoor Air Quality" published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) is the most widely used standard for ventilation and indoor air quality.

Heating, Ventilation and Air Conditioning (HVAC) System

The purpose of ventilation is to:

1. control temperature and humidity;
2. remove odours and airborne contaminants;
3. introduce outdoor air.

Symptoms and Concentrations of Carbon Dioxide	
Concentration of CO ₂	Symptoms Reported
Less than 600 ppm	None
600 - 1000 ppm	Occasional complaints of headache, drowsiness, stuffiness, etc.
Greater than 1000 ppm	Above complaints are widespread

Source: "Report of the Interministerial Committee on Indoor Air Quality"
Government of Ontario, September 1988.

Checklist: Inspecting HVAC Systems

INSPECT outside air dampers, noting their position, the type of control mechanism, and condition.

NOTE the distance and direction of combustion sources, building exhausts, cooling towers and other potential sources of pollutants in relation to the outside air intake.

EXAMINE garage and loading dock for proper ventilation and pollution migration.

CHECK supply air fans for operational problems, including defective belts, missing blades, build-up of particulates, and microbial growth.

CHECK the interior of the mixing chambers for signs of failing insulation, debris, rust, or microbial growth.

ENSURE that air ducts and ceiling plenums are being maintained and cleaned to prevent dust from providing a substrata for mould growth.

VERIFY the existence of a proper maintenance schedule for ceiling air handling units (AHUs) and perimeter fan coil units, induction units, and unit ventilators.

CHECK that all combustion sources are being exhausted.

ENSURE that air filters fit properly and are replaced often enough to prevent build-up of particulate matter.

CHECK the system for microbial growth.

For details refer to section 5.4.3. of "Indoor Air Quality in Office Buildings: A Technical Guide", revised 1995 (93-EHD-166), published by Health Canada

2. Formaldehyde

Sources

Many building materials, especially new materials, are potential emitters of formaldehyde gas. In libraries, these include carpets, particle board furniture, foam, plastics, carbonless paper and adhesives (associated with the binding of books). Slow off-gassing from these materials can cause a build-up of formaldehyde in the indoor air.

Health Hazards

Formaldehyde gas is an irritant and respiratory sensitizer. Symptoms of exposure include dry and sore throat, nosebleeds, headaches, memory and concentration problems, nausea, dizziness, breathlessness, burning and stinging eyes, nasal congestion, skin rashes and pain.

Assessment

Formaldehyde has a pungent odour. People can become accustomed to the smell and may not realize they are being exposed to this substance. Therefore, air monitoring should be done by a qualified person, to determine its concentration in the air.

Exposure Control



ENSURE adequate ventilation where potential sources of formaldehyde are present.

SELECT products with low formaldehyde emission levels if possible.

SEAL potential emission sources with a barrier such as polyurethane varnish.

OFF-GAS new building materials in a storage area prior to installation..

INCREASE airflow in areas of new furniture and carpets.



DO NOT RE-CIRCULATE formaldehyde-contaminated air.

3. Solvents: Volatile Organic Compounds (VOCs)

Sources

Volatile organic compounds (VOCs) are given off by solvents in paints, coatings, paint removers, paint thinners, adhesives, caulking, carpets, photocopiers, acoustic ceiling tiles, air fresheners, cleaning agents, cosmetics, organic solvents, fabric softeners, and tobacco smoke.



Health Hazards

VOCs can cause a wide range of health effects. Possible symptoms include fatigue, headache, nausea, drowsiness, dizziness, weakness, joint pains, blurred vision, skin and eye irritation and general discomfort.

As the exposure level and duration of exposure increases, more people may experience respiratory irritation, tightness in the chest, nausea and confusion.

Assessment

Check the following to assess the potential for VOC release:

- I Presence of new building materials.
- I Presence of new furniture and new carpets.
- I Use of cleaning products, solvents (check Material Safety Data Sheets (MSDS)).
- I Presence of local exhaust in chemical storage area.
- I Possibility of contamination from other areas in the building via the ventilation system.
- I Possibility of VOCs entering the building from outside sources via the air intake.

Exposure Control



INCREASE ventilation if air contaminants are widespread throughout the area.

KEEP containers closed when they're not in use.

STORE solvents, paints, cleaning liquids, and paint thinners in a separate storage room equipped with local exhaust.

ENSURE that there is adequate local exhaust in photographic and printing rooms.

Information regarding emission levels from carpets, building materials, and furniture may be available from the manufacturer and also the Canada Mortgage and Housing Corporation (CMHC) in Canada (website: www.cmhc-schl.gc.ca/en/burema/gesein/index.cfm), and the Environmental Protection Agency (EPA) in the USA (website: www.epa.gov/iaq/molds/moldguide.html)

4. Asbestos

Sources

In the past, common uses of asbestos included:

- insulation, fire proofing, sound proofing, ceiling and floor tiles, acoustic spackles, and vinyl asbestos floor tiles;
- thermal insulation on pipes, boilers, and ceilings, fire protection on structural steel beams;
- the lining of heating and ventilation duct work, window glazing, and adhesives.

Asbestos is generally not used in building materials today but some of the older installed products may still contain asbestos. Asbestos does not pose any health risk unless the asbestos fibres are released in the air. Renovation work or damage to building materials can produce dry, crumbly (friable) material capable of releasing asbestos fibres into the air.

Health Risks

Inhalation of asbestos fibers poses the risk of severe lung diseases such as lung cancer, asbestosis, and mesothelioma, 10 to 20 years or more after exposure.

Assessment

Qualified expert assistance must be sought to determine the presence of asbestos in the air and building materials.

Exposure Control

The following are general guidelines for actions to control asbestos exposure:



- ARRANGE inspections by a qualified person to identify asbestos-containing building materials.

MAINTAIN an inventory of all asbestos-containing materials by location.

ESTABLISH an asbestos management plan or strategy.

POST warning signs in all routine maintenance areas to inform maintenance personnel that asbestos is present in the building.

IDENTIFY type and location of all asbestos-containing materials.

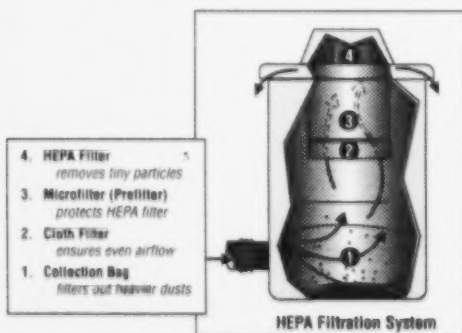
ASSIGN responsibility to someone to supervise the implementation of the asbestos management plan.

TRAIN the custodial staff in asbestos awareness and safe work practices.

ESTABLISH a procedure for reporting damaged or exposed asbestos-containing material that may cause asbestos exposure.

ESTABLISH procedures for proper removal and disposal of asbestos-containing materials and ensure that all employees understand and follow these procedures.

NOTIFY utility workers and other personnel working in areas where asbestos-containing material is present.



5. Dusts

Sources

Indoor sources of dust include humidifier additives, poor housekeeping, photocopiers, scale, rust, building materials, fungal spores, smoke, duct pipe insulation, asbestos, carpet fibers, and the large volume of paper and books housed in libraries.

There is dust in indoor air where there is:

- I exposed building material (e.g. concrete, insulating material);
- I renovation, retrofit activity;
- I dust in the air intake;
- I dust and debris in the air delivery and return dampers;
- I dusty filters;
- I fine dusts associated with newspapers and books;
- I dust deposits and/or odours around humidifiers / photocopiers;
- I use of personal ultrasonic humidifiers;
- I dusts associated with equipment used in libraries;
- I handling of dusty materials;
- I paper shredding machines.

Outdoor sources of dust include airborne urban pollutants, construction activity, traffic activity, factory emissions, and releases from fires and accidents.

Health Risks

Dusts can have adverse effects on the skin, eyes and respiratory system. Symptoms include irritation of the eyes, nose, throat and skin as well as coughing, sneezing, and respiratory problems.

Some dusts are toxic. Long-term exposure to asbestos fibres increases the risk of lung cancer. Other dusts such as lead and mercury compounds and silica dusts can cause a wide range of illnesses.

Assessment

Level and type of dust is determined by air monitoring. Such monitoring should be done by qualified industrial hygienist

Exposure Control



MAINTAIN an adequate air filtering system.

CLEAN air circulation system regularly.

CLEAN areas where dust settles frequently.

USE local exhaust in areas where there is excessive dust from renovations or movement of materials.



DO NOT RE-CIRCULATE air that contains excessive levels of dust.

6. Mould

Sources

Mould grows in hot and humid locations. In a library, moulds may grow in books and floor coverings which have become wet. Moulds appear as spots on book covers and exposed pages. Such spots can be of many different colours. All moulds are not toxic and only certain types of moulds pose health risk.

Health Risk

Mould can cause allergies. It can adversely affect people, especially those with allergies or other respiratory problems. Other fungi may cause skin and eye irritation and infections.

Assessment

A visual inspection is the most reliable method of identifying mould problems. The most common signs of water damage will be discolouration and staining. Moulds will most often appear as dark spots, stains or patches. If you find a suspicious spot, you can do a check to see if it is mould or fungi by dabbing the spot with a small amount of chlorine bleach. If the colour changes or disappears, the stain is "likely organic and probably mould" (Canada Mortgage and Housing Corporation, 1999).

While conducting the inspection, look for mould in or under the following places:

- ! ceiling tiles,
- ! walls, including wallpaper, and condition of drywall,
- ! floors,
- ! window sills,
- ! insulation,

- I carpet,
- I furniture (condition of fabric, upholstery, etc.),
- I if possible, look behind duct work and walls (a mirror will help),
- I condition of any cardboard or paper present.

Also look for "standing water" – puddles of water around and under sinks, tubs, drip pans for air dehumidifiers.

Surface sampling for mould can be done by scraping or swiping suspected spots. Air monitoring is also possible, but it is not considered routine. (New York City Department of Health, 2000)

Preventing Growth of Mould



DO NOT ALLOW mould to develop by keeping the relative humidity at 30 – 50%.

CONTROL humidity with air conditioners and/or dehumidifiers.

INSULATE cold surfaces to prevent condensation on piping, windows, exterior walls, roofs and floors where possible.

ENSURE there are no leaks from roofs or broken water pipes.

BLOCK OFF areas where moisture can seep through cement foundations and can dampen the floor, carpeting and walls. This will minimize condensation and indoor dampness.

CLOSE windows tightly during winter months.

REDUCE the amount of water used when cleaning carpets as much as possible.

CLEAN-UP any floods or spills immediately (within 24-48 hours).

ENSURE that the heating, ventilation and air conditioning system provides adequate outside air, air filtration and exhaust of air contaminants. A minimum of 20 cubic feet per minute (cfm) of fresh air per occupant is recommended in ASHRAE Standard 62-1989, "Ventilation for Acceptable Indoor Air Quality".

UNDERTAKE regular maintenance of the HVAC
* system.

ENSURE that filters are changed or washed, and that the water reservoirs are treated or changed regularly.

ENSURE that humidifiers use clean water.

ENSURE that wet books are immediately removed for maintenance.

CLEAN & DUST shelving regularly. For dust protection wear light gloves and disposable paper masks – especially important for workers with potential breathing problems.

Recommended procedures and precautions for staff weeding library books

INSPECT library materials for mold contamination.

WEAR nitrile gloves.

INSTITUTE a respirator program.

WEAR disposable half-mask respirator with a HEPA filter if mould is present.

WEAR clothes that can be machine washed. Wash clothes after weeding and before wearing again.

INFORM the staff of the potential hazards and necessary precautions.

Mould Removal



CONSULT with an expert if you notice signs of mould. **IDENTIFY** the location and source of the mould outbreak.

REMOVE any water-damaged wallpaper, carpeting, foam-rubber carpet pads, drapery, upholstery fabric and air fillers.

CLEAN baseboards, hardwood floors, ceiling tiles, cement, wood beams, framing and roofing material.

VACUUM the entire area and immediately discard the disposable bags.

STEAM clean all carpets and dry quickly.

MINIMIZE dispersal of any mould into the air.

INCREASE air circulation—lower humidity. Open windows and provide fans to exhaust air out of contaminated areas.

WEAR correctly fitted mask with a HEPA (high efficiency particulate air) filter to avoid breathing any airborne mould spores while removing moulds.

ISOLATE affected materials by sealing books or papers in air-tight plastic bags.

DECONTAMINATE the mouldy areas. A 10-percent solution of household bleach can be an effective disinfectant. However, it should be used only by those trained to use it safely using appropriate chemical-resistant gloves and chemical splash goggles.

Renovations

When the renovations are being done:



REPLACE the mould affected material.

ENSURE adequate ventilation.

INSTALL proper air-vapour barriers.

Individuals with allergies, asthma, or other respirator problems should stay away from infested areas.

7. Dust Mites

Dust mites are members of the spider family. Mites survive and grow in warm and humid areas (relative humidity greater than 60%) with a sufficient supply of food such as human skin scales.

Books, carpets and fabric provide a trap for dust and can be a breeding ground for dust mites.

Health Risk

Dust mites produce allergens. People who inhale mite allergens may become sensitised and experience sneezing, runny and itchy nose, coughing, wheezing, asthma attacks or a combination of these symptoms. Onset of symptoms can be delayed and occur during the night.

Exposure Control



USE vacuum cleaners equipped with HEPA (99.97% efficient) filters. Ordinary vacuum cleaners pass fine dust back into the room air with the exhaust air.

CHANGE or CLEAN filters in the heating/cooling system regularly according to manufacturer's specifications, usually stated as a pressure drop.

KEEP washroom floors and other areas dry and clean to prevent dust build-up.

USE a dehumidifier in damp areas.

AVOID dust-catching draperies, blinds and carpets.

PERIODICALLY clean shelves and books to remove dust.

8. Sanitation/Housekeeping

Due to the heavy volume of visitor traffic at the library, employees may come in contact with potentially infectious materials.



FOLLOW sanitation procedures and safe work practices for washrooms as recommended by your employer.

CHECK product labels and MSDSs to know the potential hazards and safe work practices for all cleaning and disinfecting products you use.



OBTAIN WHMIS (Workplace Hazardous Materials Information System) training in order to be able to use cleaning and disinfecting products safely. WHMIS training is required by OHS legislation.

WEAR personal protective equipment and clothing recommended by your supervisor.

ALWAYS clean counters and work areas before and after using them.

SELECT cleaning products appropriate for the task and facility. Use according to the recommend procedures to ensure proper cleaning.

USE germicides or diluted bleaches to disinfect areas as required.

REPORT all spills, accidents, incidents and other problems to your supervisor.

MINIMIZE accumulation of loose and dust-producing materials and waste.

PLACE all trash and scrap in proper containers.

DISPOSE of oily rags in covered metal containers.

CLEAN UP spills promptly following prescribed procedures.

CLEAN UP moulds and dirt patches on walls and windows.

CLEAN soaked carpeting professionally within 24 hours to prevent mould and bacteria growth in the fibres, backing and under the carpeting.



DO NOT EAT, DRINK, or SMOKE while using a cleaning agent, bleach, disinfecting agent, or other chemical product.

DO NOT LEAVE open containers of bleaches, paints or solvents in the washrooms or other areas used by staff or visitors.

DO NOT MIX cleaning products.

DO NOT BLOW OFF dust. Use a vacuum cleaner or a brush.

It is important that all library facilities are free from garbage, debris, filth, and potentially infectious materials.



9. Pests

Libraries may experience problems due to rats and mice, especially in the winter months. Pests are attracted to left over food and will eat the leather and cloth bindings, paper, glue and paste of books. Droppings and shredded pages are evidence of the presence of rats and mice.

Health Effect

Contact with feces, urine, shed hairs and dander can cause allergies, respiratory problems and asthma.

Housekeeping to Control Pests



MAINTAIN proper housekeeping practices.

REDUCE humidity levels in the library.

CHECK for damp areas, especially pools of water and accumulation of waste and debris.

DENY rodents access to the building through the use of sound building construction and by plugging all holes in foundation walls (especially around any utility pipes).

TRAIN people who may use chemicals against pests.

USE pest control / extermination experts for any infestations.

10. Noise

Noise levels in libraries are generally very low and do not pose risk of hearing loss. However, low levels of noise may cause annoyance and distraction.

The main objectives of library noise control guidelines are:

- To prevent disruption of verbal communication.
- To prevent discomfort and stress.
- To minimize interference with concentration in the performance of mental work.

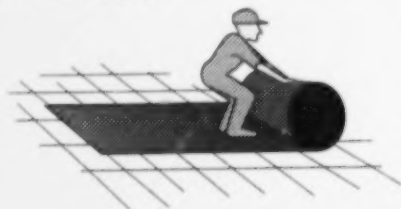
Level of normal speech is generally 60-65 dB(A) (A-weighted decibels). To prevent annoyance and distraction, background noise should be 50-55 dB(A).

CSA Standard CSA Z412-2000 recommends that noise levels in an office should be about 50 dB(A). The same may apply to libraries.

Guidelines for minimizing noise levels in Libraries



USE sound-absorbing materials such as carpeting (with durable underpad), curtains, acoustic baffles and noise enclosures, acoustic ceilings, plants and textile wall hangings.



Carpeting is a good sound-absorbing material.

11. Temperature and Humidity

Thermal comfort depends on air temperature, humidity and air movement. Acceptable ranges for temperature and humidity are often referred to as the comfort zone in which a person wearing typical office clothing should feel neither too cold nor too warm.

Humidity is expressed as percent relative humidity (% RH). Relative humidity of 50% means that the moisture content of air is 50% of the maximum possible moisture (100% RH) that air can hold at a given temperature.

Humidity lower than 20% causes dry throat and dry skin, and can cause static electricity build-up on the body. Higher humidity (greater than 70%) makes people feel stuffy and can contribute to the development of bacterial and fungal growth (especially in sealed buildings). Airborne moulds and fungi cause allergic reactions in some sensitive individuals.

ASHRAE Standard 55-1992, "Thermal Environmental Conditions for Human Occupancy", recommends the following acceptable temperature at relative humidity of 50% and air speed less than 0.15 m/sec. 30 fpm).

ACCEPTABLE TEMPERATURES		
Season	Clothing	Temperature
Winter	Heavy slacks, long sleeve shirt and/or sweater	20-23.5°C (68-75°F)
Summer	Light slacks and short sleeve shirt	23-26°C (73-79°F)

Guidelines for maintaining an adequate thermal environment



REPORT ventilation problems to the joint health and safety committee.

ENSURE that library ventilation is maintained by building maintenance engineers.

USE portable heaters (with a thermostat) only with employer approval. Heaters are potential fire hazards.

PLACE heaters or fans so that they do not blow air directly on to workers.

SEAL openings to prevent outside air from entering the building.

PLACE fans so that they do not vibrate and fall off surfaces.

UNPLUG heaters and fans and wait for blades to stop before moving them.

USE window curtains or blinds to increase or decrease heat from the sun.

CONSIDER impact on ventilation before rearranging library equipment, furniture, partitions, and computer workstations.



DO NOT USE heaters that produce toxic fumes (e.g., kerosene heaters).

DO NOT INSTALL partitions and room dividers without evaluating the impact on local ventilation and ensuring proper provision of supply air and air circulation.

12. Lighting

Inadequate lighting can cause visual problems including:

- ! eye strain (soreness, itching, redness and tearing);
- ! blurred vision;
- ! dry eyes or eye irritation;
- ! discomfort from screen glare;
- ! frequent changes of eyeglass and contact lens prescriptions;
- ! headaches.

Preventing Vision Problems



POSITION work so that it is easy to see without glare. Use adjustable chairs, well-positioned VDTs, at right angles to windows and light sources.

USE clear, legible source documents and VDTs with good image quality.

MAINTAIN adequate humidity levels to prevent dry eyes.

SCHEDULE regular eye examinations to avoid problems of uncorrected or improperly corrected vision.



USE a screen with a light background when working with text.

POSITION desk with window to the side of the worker.

POSITION desk to minimize glare. If you can see the image of the light fixture reflecting from your desktop, you have a glare problem.

AVOID prolonged exposure to bright light.

USE dedicated task lighting for specific job activities.

USE and ADJUST window blinds or drapes to control light and glare.

USE non-glare finishes and neutral (not too bright) colours on walls and furniture. The colour and finish of a surface determines how much light it reflects.

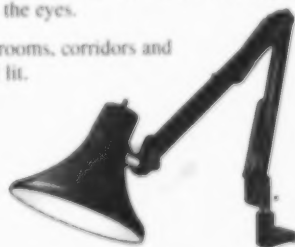
USE adjustable task lights to increase light levels when needed.

CHECK fluorescent lights for flicker. Replace fluorescent tubes regularly and maintain fixtures properly.

LOOK up and away from work frequently to rest the eyes. (For example focus on an object more than 3 metres away then shift vision back to screen and refocus)

POSITION your monitor so that it is the correct height and distance from the eyes.

ENSURE that storerooms, corridors and stairways are well lit.



Bifocal / Multifocal / Glasses

The reading angle for bifocal and multifocal glasses differs from the optimal viewing angle for working at a computer screen. If you use bifocal or multifocal glasses:

POSITION computer monitor so that the neck can remain in a neutral position while wearing glasses.

ADVISE your eye specialist of the distance between your eyes and the computer monitor so that proper adjustments can be made to your glasses for computer use.

OBTAIN recommendation for glasses designed for computer work.

Illumination Levels

Illumination describes the amount of light which falls on an object or surface. It is measured in units called LUX (illumination per square metre). Too high a level of light can result in reflected glare and shadows which lower levels of light may make detailed library work difficult. In the following chart, the higher ranges are for workers with poorer vision and for work requiring speed and accuracy.

LIGHTING LEVELS

Location	Light Level (lux)*
Library Stacks	Active 300 / Inactive 75
Conference rooms	300
Building Exteriors	Surrounds 10 / Entrance 50
Circulation Desk	300
Reading Areas	300 -750
Stairways	150
Washrooms	150
Reference room / Reading room	500

*Source: *Canadian Courthouse and Law Society Library Standards*, June 1998.
IES Lighting Handbook, ninth edition, Illuminating Engineering Society of North America (2000)

10 lux = approximately 1 foot candle

Regulations for lighting levels in the workplace are specified in some federal, provincial, state and territorial regulations.



DO NOT HANG glossy pictures or objects where light will reflect into eyes.

DO NOT PLACE VDT facing a window.

13. Radiation from VDTs

Video display terminals (VDTs) are potentially capable of emitting extremely low levels of the following types of radiation:

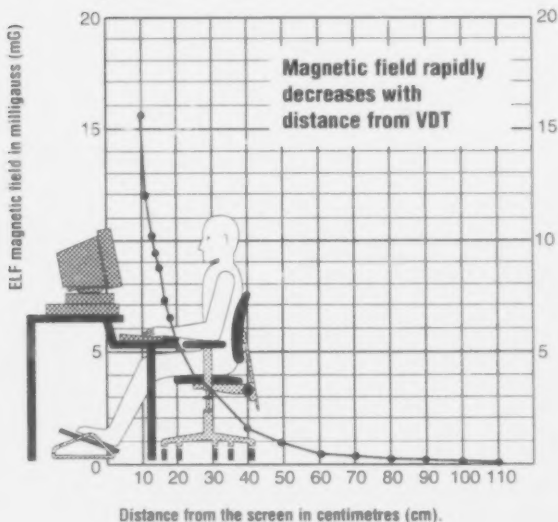
Electromagnetic radiation of very low frequency (VLF) emitted by electronic components that produce images and letters on the VDT screen.

Electromagnetic radiation of extremely low frequency (ELF) emitted as a result of electric power use.

Protection: Precautionary Principles

There are no Canadian or US regulatory exposure limits specific to video display terminals.

Scientific research results are not conclusive regarding possible links between ELF electromagnetic radiation



exposure and health effects. In view of this uncertainty, we recommend the precautionary principle as a preventive measure. This means avoiding all unnecessary exposures.

Electromagnetic fields decrease rapidly as the distance from VDT increases. Sitting as far back as comfortable and keeping distance from adjacent VDTs will reduce exposure.

14. Fragrance Sensitivity

Some individuals suffer allergic reaction to fragrances. If someone is sensitive to fragrances, make an effort to provide a fragrance free work area for this individual.

The following points should be considered if fragrance sensitivity is an issue in the library:



CONDUCT an assessment of employees affected by scents

ADVISE staff to:

- I Avoid wearing strong perfumes and colognes.
- I Avoid spraying perfumes and colognes in the workplace.
- I Recommend that maintenance staff use scent-free industrial cleaning products.

Section IV

Ergonomic Concerns in the Library Workplace

1. What is Ergonomics?
2. How do Work-related Musculoskeletal Disorders (WMSDs) Occur?
3. Controlling Ergonomic Hazards
4. Posture
5. Ergonomic aspects of Visual Display Terminals
6. Workstation Exercises
7. Shelving Units
8. Shelving Books
9. Shelving Equipment
10. Work Organization

1. What is Ergonomics?

Ergonomics is defined as the science of matching the work (job) to the worker.

Examples of library work with potential of ergonomic concerns are:

- ! Work using computers.
- ! Book check-out and return.
- ! Reshelving returned books.
- ! Pushing book trolleys.
- ! Moving book return boxes.
- ! Manual operation of moveable trucks.
- ! Work environment.

Consequences of Poor Ergonomic Conditions.

Poor ergonomic conditions result in musculoskeletal disorders. These injuries involve muscles, and tissues connecting bones, namely tendons and ligaments.

These musculoskeletal disorders are known by many different names such as:

- ! Overuse Syndrome;
- ! Over-Exertion Injury;
- ! Repetitive Strain Injuries (RSI);
- ! Musculoskeletal Injuries (MSI);
- ! Repetitive Motion Injuries (RMI).
- ! Work-Related Musculoskeletal Disorder (WMSD)

In this guide we use the term WMSD (Work-Related Musculoskeletal Disorder) to describe such injuries.

2. How do Work-Related Musculoskeletal Disorders (WMSDs) Occur?

The following are the four main causes of WMSDs:

Repetition

Repetitive movements are one of the leading risk factors for WMSDs, especially when such movements involve the same joints and muscle groups. Keyboarding, mouse operation and data entry are examples of repetitive movements in office work.

Force

Movements are forceful when substantial physical effort is required to perform a task. The amount of force we use depends on many factors, such as the weight of the objects to be lifted and their placement in relation to the body. We have to use more force to lift and carry a box if our arms are outstretched and the object is held away from the body. Also, we have to use more force to lift the same object in a "pinch" position than in a "hook" position.

Posture

Fixed or awkward body positions can cause discomfort and fatigue if they are maintained for long periods of time. Everyone is familiar with the discomfort associated with sitting rigidly for too many hours.

Duration

Duration of work is an important factor. WMSDs develop slowly and are usually noticeable only after weeks, months, or years. Injury as the result of a single accident does not cause WMSDs. For example, slipping on a wet floor could cause a sprain but this injury would not be called a WMSD.

Musculoskeletal Injuries

Symptoms of some common types of injuries are summarized in the following table:

Common Musculoskeletal Injuries	
Type of Injury	Symptoms
Back disorder	Pain in the back; difficulty in turning, bending and moving the back.
Carpal tunnel syndrome (CTS)	Compression of the median nerve as it enters the palm of the hand through "carpal tunnel". The symptoms are pain and numbness in the index and middle fingers and weakness of the abductor muscles of the thumb.
Tendonitis	Pain mainly in the hands and wrist due to inflammation of the tendon as a result of overuse. Tendons are fibre bundles that attach muscles to bones.
Tenosynovitis	Pain due to inflammation of the tendon, sheath, producing pain and swelling. It may result from loss of lubricating system of the bone joints as a result of repetitive and excessive hand movement.
Thoracic Outlet Syndrome	Pain, arm weakness, and numbness in the arms and fingers as a result of the squeezing of the nerves and blood vessels between the neck and shoulders.
Bursitis	Restriction and pain in joint movement as a result of deficient lubrication at a bone joint, for example at the shoulder.

Pain: the early sign of injury

In the early stages of injury, pain is the main symptom. The pain can range from mild discomfort to unbearable agony and may not be confined to the site of injury.

The following chart summarizes the progression of injury

Recognize the Stages of Injury	
Early Stage	
› Aching and tiredness of affected limb during work	
› Aches not present overnight or during time away from work	
› No interference with the ability to work	
› No physical signs	
› Reversible	
Intermediate Stage	
› Recurrent aching and tiredness increasingly occurs earlier in the work shift and persists longer	
› Symptoms persist overnight and may cause sleep disturbance	
› Reduced capacity for repetitive work	
› Physical signs may be present	
› Often reversible	
Advanced Stage	
› Aching, fatigue and weakness persist at rest	
› Pain occurs with non-repetitive movement	
› Unable to perform light duties	
› Difficulty with non-occupational task	
› Physical signs are present	
› May not be reversible	

3. Controlling Ergonomic Hazards

Workstation Design

Workplace design includes:

- work surface (desks);
- seats (chairs);
- workstation layout.

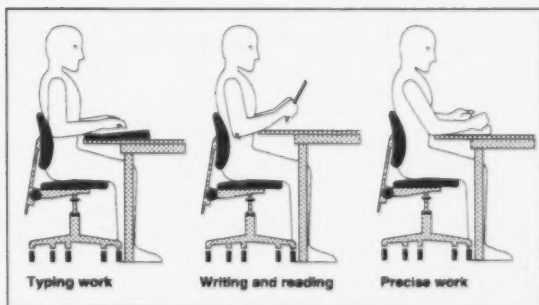
Work Surface

The work surface is the desk, table or bench where an individual works. If the work surface is too high or too low, the individual performs the tasks in an awkward body position.

- For typing and keyboarding, the work surface should be about the height of the elbows with the arms hanging straight by the sides.
- For writing and reading the work surface should be about 5 cm above elbow height.

If the work surface is not adjustable, then the seat height should be adjusted so that the elbows are about the same height as the top of the work surface.

The thighs should be horizontal. If the feet are not resting flat on the floor, use a footrest.





MAKE adjustments so work surface is at the correct working height.

ENSURE that work surface is large enough to hold materials.

AVOID cramping legs under work surface.

AVOID over-reaching and twisting.

STORE frequently used items in the most convenient places.

DO NOT STORE materials under work surface.

Seat

The seat should enable an individual to work without using awkward body positions or forceful movements. A good seat has the following qualities:

- I provides back support;
- I can be adjusted;
- I can get close to the work surface;
- I moves easily.

To encourage good body positions, the height of the seat and the slope of the back rest should be adjustable.



CHOOSE a chair with:

- I adjustable height, seat, arm rest and back rest;
- I five casters for easy movement;
- I a backrest which is shaped to support the lower back and does not give way;
- I a seat height which does not put pressure on the back of the thighs;
- I a seat that curves downwards at the front edge to prevent pressure on the back of the legs;
- I a stable base;
- I a swivel mechanism so that twisting can be avoided;

- ┆ arm rests which do not prevent the chair from being drawn up to the desk or interfere with natural movement;

- ┆ a non-slip breathable seat fabric.



TIGHTEN the chair backrest so that it does not give way with body weight.

ADJUST the chair to suit your height and your workstation height.

To adjust a chair and work surface:

STAND in front of the chair. Adjust the height so the highest point of the seat is just below the knee cap.

SIT so that the clearance between the front edge of the seat and the lower part of the legs just fits a clenched fist.

ADJUST the backrest of the chair so that it supports the hollow of the lower back.

ADJUST work surface to about the height of elbows with the arms hanging straight by the sides.

RAISE the chair to get the proper arm and upper body position when using a fixed height work surface.

ADJUST chair height so elbows are about the same height as the work surface.

USE a footrest if the feet cannot rest flat on the floor or if there is pressure on the back of the legs. The footrest should be adjustable and support the whole foot.

Workstation Layout



ARRANGE work in a semi-circle.

POSITION tasks within easy reach.

USE a swivel chair:

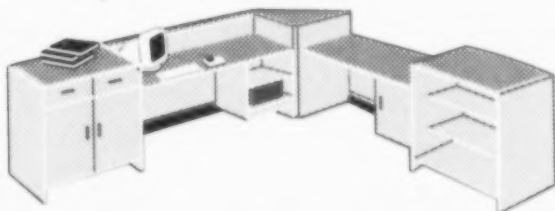
- ┆ to reduce body twisting;

- ┆ to allow easy movements;

-
- ! to reduce side-to-side motions.
- USE sloping work tables wherever possible:

- ! to reduce bending;
- ! to encourage an upright position while sitting or standing.

Library Circulation Desk



Activities

Circulation desks are generally located in the main lobby. The activities of the circulation desk staff include:

- ! checking out books using computers and a scanning system;
- ! receiving returned books, handling fines, providing basic information;
- ! placing books and other reading materials on reserve.

Ergonomic concerns

Working at a poorly designed circulation desk can cause repetitive strain injuries of the hands, back and shoulders. The causal factors include:

- ! improper desk and workstation height;
- ! awkward posture while using computer keyboard;
- ! excessive direct and indirect glare due to very bright lighting of the lobby;
- ! extended reach for books under the counter and on shelves;

- ‡ stooped postures while lifting books from the lower shelves under the counter;
- ‡ using a pinch grip to lift heavy books;
- ‡ prolonged standing;
- ‡ many people using the same workstation (circulation desk).

Preventive measures:



DESIGN circulation desk to fit various tasks.

USE adjustable counter top for keyboard.

LOCATE circulation desk printers at location(s) adjustable for working in standing/sitting position.

ORIENT computer monitor with a swivel and tilting feature to eliminate glare.

USE adjustable sit/stand chair to suit the worker.

PROVIDE built-in foot rails or portable footrests to assist standing workers.

USE appropriate anti-fatigue floor mats to mitigate foot, leg and back fatigue.

PLACE bar codes on the outside of library materials to reduce the need to open books at checkout/check-in.

ENCOURAGE patrons to present outgoing library material with barcode label up.

LOCATE reserve shelving away from circulation desk and make it self-serve to reduce worker movements.

WEAR shoes with good support.

4. Posture

Working in a neutral posture minimizes the risk of injury.

A neutral posture is:

- † a naturally straight and relaxed spine with arms hanging loosely at the sides;
- † relaxed shoulders in line with the body;
- † a neutral elbow posture close to the body;
- † relaxed wrists, straight in line with the lower arm.

Static postures contribute to WMSDs. Static posture uses the muscles in a fixed, locked position. Generally, there is little or no rest period and the muscles tire quickly. Examples of static work can be associated with prolonged sitting or standing. Prolonged static postures can cause back pain, shoulder pain and physical stress.

Working in a Standing Position

Library work in shelving, reference/user services and at the circulation desk often requires prolonged standing. Standing is a natural human posture and by itself poses no particular health hazards. However, working in a standing position on a regular basis can cause sore feet, swelling of the legs, varicose veins, general muscular fatigue, low back pain, stiffness in the neck and shoulders and other related health problems.



CHANGE body positions frequently to avoid fatigue.

ORGANIZE workspace to ensure that there is enough room to move around and change body position.

USE foot rails or portable footrests at circulation desk to be able to shift body weight from one leg to another.

USE adjustable seats so that the work can be done either sitting or standing.

What can workers do to reduce discomfort while working in standing position?



Adjust the height of the work according to body dimensions. Use elbow height as a guide. Organize your work so that the usual operations are done within easy reach.

ALWAYS face the object of work.

KEEP body close to the work.

ADJUST the workplace to get enough space to change working position.

USE a foot rail or portable footrest to shift body weight from both to one or the other leg. Use a seat whenever possible while working, or at least when the work process allows for rest.

What should workers avoid while working in a standing position?



Avoid reaching behind the shoulder line. Shifting feet to face the object is the recommended way.

Avoid overreaching beyond the point of comfort.

Avoid reaching above shoulder line.

5. Ergonomic Aspects of Visual Display Terminals (VDT)

VDT Workplace Checklist

VDT workstations must be adjustable to accommodate various individuals using them.

You may use the checklist on page 58 to identify problems in a workplace with VDT users.

"Unsatisfactory" answers indicate a potential problem and should be followed up. They may indicate the need for adjustment or changes in the workplace or job design.



VDT Workplace Checklist

✓ **Satisfactory**

✗ **Unsatisfactory, requires attention**

VDT

- ✗ Top surface of the keyboard space bar (or bottom row of keys) is no higher than 6.5 cm (2.5 in.) above the work surface.
- ✗ During keyboard use, the forearm and upper arm are at an angle of 80°-100°, with the upper arm almost vertical.
- ✗ The wrist is relaxed and not bent. Wrist rests are available.
- ✗ If used primarily for text entry, keyboard is directly in front of the operator.
- ✗ If used primarily for data entry, keyboard is directly in front of the keying hand.
- ✗ Keyboard is detached and moveable.
- ✗ Top of screen is about eye level with head up.
- ✗ Viewing distance is 30 to 60 cm (12 to 24 in.).
- ✗ Screen is free of glare or shadows; images on the screen are sharp, easy to read and do not flicker.

Chair

- ✗ Chair height is appropriate for the individual and work surface height.
- ✗ Chair has wheels or castors suitable for the floor surface.
- ✗ Chair swivels.
- ✗ Backrest is adjustable for both height and angle and supports the inward curve of the lower back.
- ✗ Chair height is appropriate for the individual and the work surface height.
- ✗ Chair is adjustable from the sitting position.
- ✗ Chair is adjusted so that there is no pressure on the backs of

the legs, and feet are flat on the floor or on a footrest.

- ✗ Chair upholstery is a breathable fabric.

Work Surface

- ✗ Work surface height is adjustable.
- ✗ Legroom is sufficient to change position of legs without getting up.
- ✗ Work surface is large enough to hold work materials.
- ✗ Commonly used items are close to and in front of the operator.
- ✗ Infrequently used items are stored separately.

Visual Environment

- ✗ Lighting does not produce direct glare or reflection on the screen.
- ✗ Lighting allows workers to easily read characters on the screen and source document.
- ✗ Wall colour is neutral and not too bright.
- ✗ Shiny surfaces and objects are covered or removed.
- ✗ Windows have blinds or curtains to prevent glare.
- ✗ VDTs are located away from windows, or screens are at a 90° angle to windows.
- ✗ Ceiling fluorescent lights are oriented lengthwise to the sides of the VDT.
- ✗ Room lighting is uniform and slightly dimmer than usual office lighting.
- ✗ General work areas have indirect or effused lighting.
- ✗ Ceiling fluorescent lights are covered with diffusers or parabolic louvers.
- ✗ Adjustable task lights are available over source documents.

Common Symptoms and Causes

Location	Cause
Neck pain	Monitor too high
	Chair too low
	Monitor or document holder too far off the line of vision
	Poor sitting posture
	Slumping and slouching
	Typing with winged-up shoulders
Shoulder pain	Tense shoulders while typing
Elbow pain	Desk is too high
	Mouse located too far to the side
Carpal Tunnel Syndrome	Excessive up and down wrist and finger movement
	Typing with wrists bent upwards
	Tense or tight grip on a mouse
Low back pain	Excessive periods of sitting in one position
	Poor sitting position
	Slumping and slouching
	Chair is too high
	Reading materials too close or too far
Eyes	Too much or too little illumination
Eye strain	Glare
Blurry, itchy eyes	Improper location of reading materials
	Uncorrected vision
Dryness	Low humidity

VDT Workstation Adjustment

VDTs come with various features that are built in or that can be added. Use the adjustments provided.

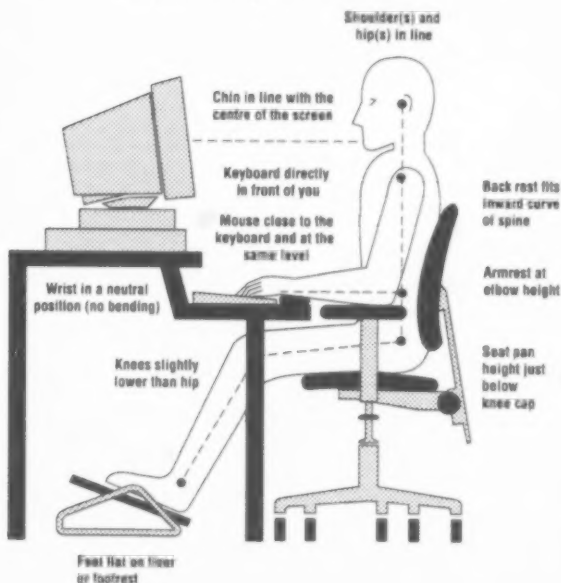


ELIMINATE glare caused by lights, windows or bright objects.

ADJUST screen brightness and contrast. It is easier to read from the screen if characters are brighter than the background. Be careful not to make characters too bright.

ADJUST the screen height so the top is just about eye level.

TILT the screen slightly backwards. Ensure that this does not create glare on the screen.



ADJUST chair, work surface and keyboard heights properly.

POSITION keyboard for two-handed "typing" directly in front of operator. Position keyboard for one-handed data entry in front of keying hand. Leave a large area free for source documents and other work materials.

MOVE the keyboard occasionally to change the arm and shoulder position.

PLACE an adjustable document holder next to the screen and at the same height.

ALTERNATE position of document holder on either side of VDT to vary head position. The head will have to turn less and eyes will adjust more easily.

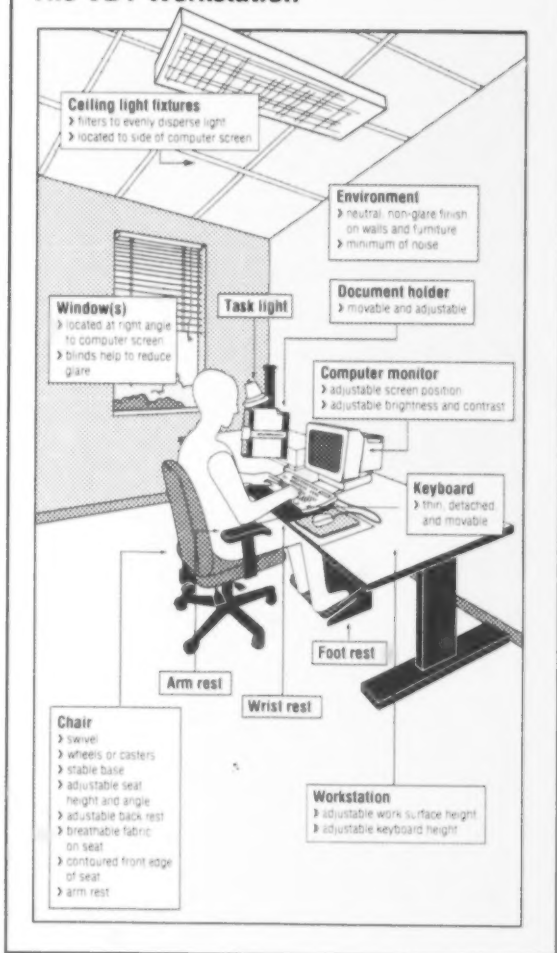
CONNECT keyboard to VDT with a cord that is at least 70 cm (28 in.) long.

CHECK for excessive noise from the VDT or printer.

CLEAN the VDT screen regularly. Follow the manufacturer's instructions.

REPORT to your supervisor if you experience problems with VDT controls, flicker or excessive noise.

The VDT Workstation



Using the Mouse

The mouse is often placed around the upper right hand corner of the keyboard and toward the back of the desk. Placing a mouse between you – the computer operator – and your keyboard greatly improves your working posture. This can be achieved by:

- using a shorter keyboard;
- using a mouse platform placed over the number keys.

For details on mouse use refer to website: www.ccohs.ca/oshanswers.



Using a mouse platform



Stress points are indicated by 

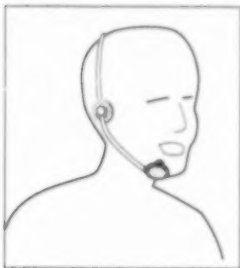
Using the Telephone while Operating a VDT



PLACE the telephone close to you on your right side if you are right-handed. It reduces repetitive reaching.

TALKING on the phone while typing or writing notes forces you to cradle the receiver between your shoulders and chin. This results in tension in the shoulder and neck causing discomfort and risk of musculoskeletal injury. If possible, use a speaker phone.

REPLACE the conventional telephone for the one equipped with a head set.



Working with VDTs in a Standing Position



ADJUST the height of the work surface to about the height of the elbow.

ORGANIZE your work so that the usual operations are within easy reach

FACE the object that you work with at all times.

KEEP your body close to the work.

ADJUST the workplace to get enough space to change working position.

USE a foot rail or portable footrest to shift body weight from both legs to one or the other.

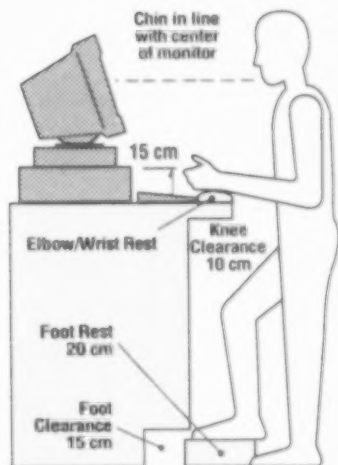
USE a seat whenever possible while performing your job, or at least occasionally when the work process allows for rest.



DO NOT REACH behind the shoulder line. If necessary, shift feet to face the object.

DO NOT OVEREXTEND your reach beyond the point of comfort.

DO NOT REACH above shoulder height.



Working at a computer terminal in a standing position.

Computer Workstations Checklist

Computer workstations must be adjustable to accommodate the individuals using them. The following checklist may be used to identify possible problems at computer workstations.

Sample

Computer Workstation Checklist	
Date _____	Workstation No. _____
Inspector(s) _____	
☒ Satisfactory	☒ Unsatisfactory, requires attention
Item	Inspect For ...
Keyboard	☐ space bar not higher than 6.5 cm (2.5 in.) above work surface
	☐ directly in front of operator (if used primarily for text entry)
	☐ detachable and moveable
	☐ forearm and upper arm form 80°-100° angle with upper arm almost vertical
	☐ wrist relaxed, not bent
	☐ wrist rests provided
Monitor	☐ top of screen is about eye level
	☐ viewing distance is 30-60 cm (12 in. to 24 in.)
	☐ free of glare or shadows
	☐ sharp, easy-to-read images that do not flicker
	☐ located away from, or at 90° angle to windows
Chair	☐ adjusted to make height suitable for the individual and work surface
	☐ adjusted so no pressure on backs of legs
	☐ adjusted so feet flat on floor (or foot rest used)
	☐ 5 wheels or casters (suitable for floor surface)

6. Workstation Exercises

Exercises at the Desk

VDT work often involves repetitive movements of the hands and few changes in body position. This can lead to muscle pain and strain.



LOOK away from the screen occasionally and focus on a distant object to rest the eyes.

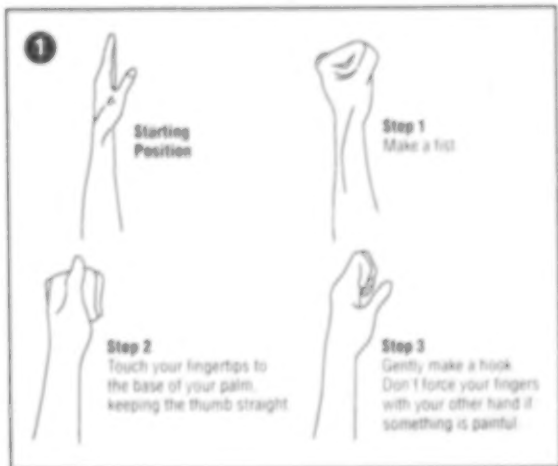
TAKE regular rest breaks to ease muscle aches, eye strain and stress.

USE rest breaks to stand up, move around and change mental activity.

RELAX muscles, stretch and change position.

Exercises can be done at the VDT workstation. Consult your doctor about exercise that is suitable for you.

Hand and Forearm Exercises



- 2** Gently bend wrist from side to side as far as possible. Hold 3-5 seconds. Repeat 3 times.



- 3** Start with arm in hand-shaking position and slowly rotate palm down until you feel a stretch. Hold 3-5 seconds. Then rotate palm up until you feel a stretch. Repeat 3 times.



- 4** Keeping elbow straight, grasp involved hand and slowly bend wrist down until you feel a stretch. Hold 3-5 seconds. Relax. Repeat 3 times.



- 5** With involved hand in a handshake position, grasp and slowly turn it to a palm down position until you feel a stretch. Hold 3-5 seconds. Relax. Repeat 3 times.



- 6** Sitting with elbows on table and palms together, slowly lower wrists to table until you feel a stretch. Be sure to keep palms together throughout the stretch. Hold 5-7 seconds. Relax. Repeat 3 times.



Neck and Shoulder Exercises

1 Shoulder Shrug

Purpose: To relieve early symptoms of tightness or tension in the shoulder and neck area.

Raise the top of your shoulders toward your ears until you feel slight tension in your neck and shoulders. Hold this feeling of tension for 3-5 seconds, then relax your shoulders downward into their normal position. Do this 2-3 times.



2 Head-Glide

Purpose: To stretch chest, neck and shoulder muscles.

Sit or stand upright. Without lifting chin, glide head straight back. You know you're doing this exercise right if it gives you the feeling of a double chin. Hold for 20 counts and repeat 5-10 times.



3 Neck Relaxer

Purpose: To relax neck muscles.

Drop your head slowly to the left, trying to touch your left ear to your left shoulder. Repeat on the right side. Slowly drop your chin to your chest, turn your head all the way to the left, then turn all the way to the right.



4 Shoulder Roll

Purpose: To relax shoulder muscles.

Slowly roll your shoulders backward five times in a circular motion. Then roll shoulders forward.



Back, Side and Leg Exercises

1 Back/Side Stretch

Purpose: To relax the back and side muscles.

Interlace fingers and lift arms overhead, keeping elbows straight. Press arms as far back as you can. To stretch sides, slowly lean to the left, then to the right.



2 Middle/Upper Back Stretch

Purpose: To stretch upper and middle back muscles.

Hold your right arm with your left hand just above the elbow. Gently push your elbow toward your left shoulder. Hold stretch for 5 seconds. Repeat on left arm.



3 Back Curl

Purpose: To stretch lower back and legs.

Grasp shin. Lift leg off the floor. Bend forward (curling the back), reaching nose toward the knee. Repeat with the other leg.



4 Ankle Flex and Stretch

Purpose: To stretch ankle muscles.

Hold one foot off the floor, leg straight.
Alternately flex ankle (pointing toes up) and extend (pointing toes toward the floor). Repeat with the other leg.



Leg Lift

5 **Purpose:** Stretch leg muscles.

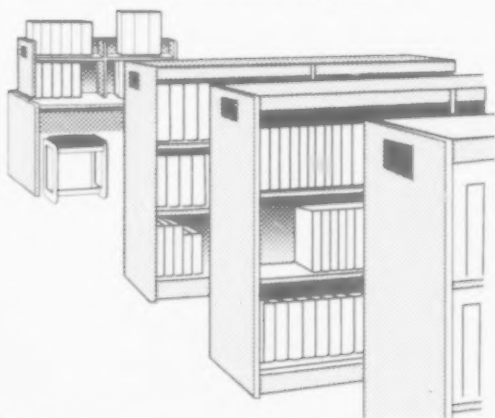
Sit forward on the chair so that your back is not touching the chair's backrest. Place feet flat on the floor. With a straight leg, lift one foot a few inches off the floor. Hold momentarily, return it to the floor. Repeat with the other leg.



7. Shelving Units

Risk of injury may arise from:

- I books falling from overloaded or improperly arranged shelves;
- I toppling of unstable shelves;
- I too narrow a space between shelving units for movement of book trucks and personnel.



ENSURE that self-contained shelves are stable without support from another structure

PROVIDE sufficient width between library shelves for areas open to public access. For further information refer to "Ergonomic Design Guidelines for Libraries" published by Vancouver Public Library (BC Canada).

MOVE shelves to the walls or other stable objects to prevent accidental toppling.

INSPECT shelving units for:

- I wear and tear due to aging;
- I sagging shelves;

- I missing and loose parts, sharp edges;
- I weak moorings.

INSPECT revolving cases for wear and tear, smooth and quiet motion.

ENSURE that workstation shelves are moored to their supporting structure and are not overloaded with books and other objects

REPORT any collapse or falling of shelves to your supervisor.

USE appropriate height for a library's shelving to minimize the hazards in reaching the upper shelves.

ENSURE that shelves are adjustable

ENSURE that shelves are properly anchored, especially libraries in earthquake prone areas.

Compact Shelving

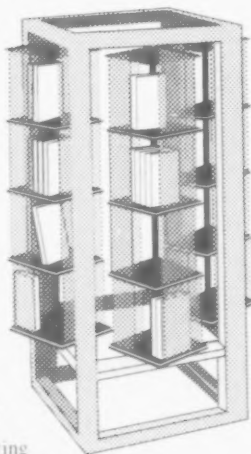


ENSURE that compact shelving runs smoothly along its tracks without squeaks or rattles.

CHECK that revolving bases are properly loaded (so as not to tip) and also that parts are not rubbing together.

CHECK the aisles before moving compact shelving to avoid trapping anyone.

INSPECT compact shelving regularly, especially electrical and mechanical components.



8. Shelving Books

Shelving involves putting books in their proper places on the shelves of a library. Shelving, re-shelving and periodic shifting of books on library shelves is a continuing process in library work.

Hazards

Shelving can pose the risk of musculoskeletal disorders due to:

- I weight of books;
- I extremes of reaching and bending;
- I high repetition rate of tasks.



USE book trucks to transfer books to shelves.

AVOID holding a large number of books on a book truck.

ENSURE that books are not too tightly packed in a shelf as the force required may cause shoulder, back, and arm or hand pain

ENCOURAGE staff to report any back, shoulder or hand problems.

ROTATE duties so to reduce risk of injury.

AVOID repeated awkward postures, twisting and bending to reach objects.

LOCATE (if practical), heavy books at waist height.

TRY to keep the lowest shelf at least 30cm above the floor.

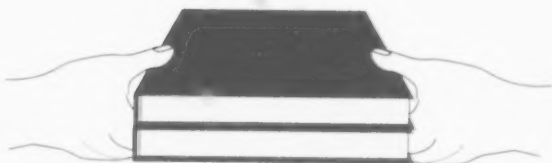
SHARE shelving tasks with co-workers or with other library tasks.

MINIMIZE carrying of heavy books by using a correct type of cart/book truck.

PLACE book truck next to yourself and in line with the shelves in order to minimize stretching and twisting.

USE portable step / foot stool or portable stairs when reaching items above shoulder height.

HOLD books using two-handed power grip, as this will reduce the load to the dominant hand and results in more neutral hand positions than shelving with one hand.



Two-handed power grip

ENSURE adequate space to maintain good body posture when shelving and sorting books

AVOID extreme wrist bending, extended reaches, awkward postures, and prolonged static postures.

AVOID the use of a pinch grip (between thumb and tips of fingers) when shelving.

CONSIDER use of sure grip gloves to help preventing slipping in handling materials.

Recommended Maximum Weight for Shelving Tasks

Shelving Task	Recommended Maximum Weight
Lifting from waist level to top shelf	8 kg (17.6 lbs)
Lifting from floor to top shelf	4.9 kg (10.8 lbs)
Stand from squat with armload of books	7.7 kg (17 lbs)
Lifting from floor to top stack on table (1.3 m)	4.7 kg (10.3 lbs)
Lifting from bottom row on cart to top row	7.7 kg (16.9 lbs)

*Source: "Ergonomic design for libraries", Vancouver Public Library,
750 Burrard street, Vancouver BC V9Z 1X5, Canada*

9. Shelving Equipment

Carts, book trucks, two-wheeled carts,
book receiving carts

Risks

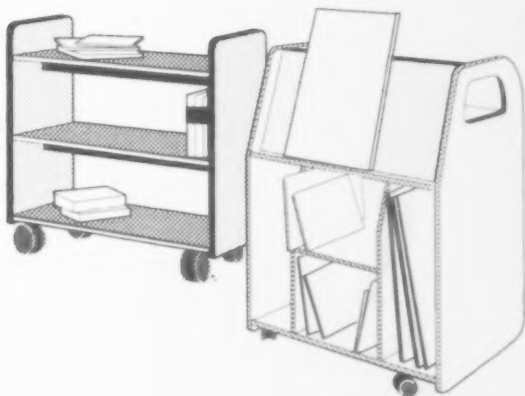
- ┆ slips, trips, falls,
- ┆ crushed hands,
- ┆ collisions.

General

- ✓ KNOW the weight of the object to be moved.
- KNOW the capacity of the handling device to be used.

Carts

- ✓ USE a proper book truck or cart designed for the job.
- WEAR gloves or other personal protective equipment as required in your library.



USE carts with the largest diameter wheels practical.

USE carts with hand guards.

PUSH carts when possible. Pushing is easier on the back than pulling, and prevents the cart from catching your heels.

PUSH from the end, not the sides.

WALK at a normal or slow pace when pushing a cart.

PULL carts through swinging doors.

ANCHOR unstable or top heavy loads.

STORE carts in designated areas with handles in the up position. Remove removable draw handles and store separately.

LUBRICATE wheel bearing and other moving parts on a regular basis.



DO NOT drop wheels off the edges of loading platforms.

DO NOT cut corners or pass too close to obstacles or walls — avoid jamming your hands.

DO NOT overload a cart or pile materials that obstruct your view.

DO NOT use a damaged cart, particularly a cart with faulty wheels.

Two-Wheeled Carts (hand trucks)



USE knuckle guards to protect hands from being jammed against obstructions.

USE carts with the wheels as far forward as practical.

KEEP feet clear of the wheels.

STORE carts with the tongue under a pallet, shelf, or table.



Book Return Receiving Cart



AVOID book drops that return books to the floor.

USE a book return-receiving cart large enough to hold books to avoid picking materials off the floor.

ENSURE the book return-receiving cart has a fold down side for easier access.

ENSURE that a platform shelf is mounted to a spring mechanism that automatically raises and lowers according to the weight of books.

Four-Wheeled Carts (book trucks / carts)



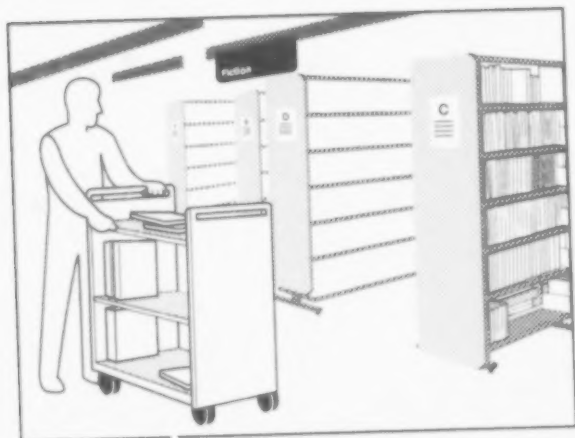
PLACE LOADS evenly on the cart to prevent tipping.

LOAD items so they will not slip or fall.

SELECT a book truck that is easy to manoeuvre on all floor surfaces.

INSPECT book trucks for good quality wheel bearings, large rubber wheels, and handles at a convenient angle/height.

ENSURE that book truck allows sufficient foot space for a natural walking gait.



AVOID manoeuvring a fully loaded book truck on carpeting, uneven surfaces, ramps and differences in floor levels.

CHECK that the book truck moves easily.

PUSH rather than pull, book trucks.

CONTROL the cart from the low side when going up or down a slope.

PULL (not push) book trucks when exiting an elevator

KEEP book truck close to your body.

ENSURE that handles are at protected places on the racks or body of the truck so that traffic, walls, or other objects being passed will not crush or scrape the operator's hands.

INSPECT book trucks for loose and worn out wheels and stability.



DO NOT load in a manner that obstructs the operator's vision.

Ladders

Libraries use small, portable ladders and other devices to work at elevated levels. These include:

- † fixed stair,
- † stair ladders,
- † portable stairs,
- † step ladders,
- † step stools / kick stools and
- † rolling ladders.



INSPECT ladders before each use for:

- † missing, cracked, split, worn, loose or broken rails, braces, steps or rungs (they are loose if they can be moved by hand)
- † sharp edges on rails and rungs
- † twisted or distorted rails
- † loose nails, screws, bolts, and hinges
- † rough or splintered surfaces
- † damaged or worn non-slip feet
- † excessive wear, especially on treads

USE a ladder designed for your task. Consider strength, type and if ladder meets appropriate safety codes.

LOCATE ladder on firm footing clear of major library traffic areas.

ENSURE that ladder is correct height.

ENSURE that steps are deep enough to fit the length of your feet.

ENSURE that ladders have slip free rubber feet.

X DO NOT MAKE temporary or makeshift repairs on ladders

DO NOT TRY to straighten or attempt to use bent or bowed ladders

TAKE defective ladders out of service.

Working on Portable Ladders

✓ FACE the ladder when going up or down and when working from it.

KEEP the centre of your body within the side rails.

REACH only for items directly in front of you.

LOCK ladder into place.

PLACE ladder on an even surface, free from clutter.

ENSURE that the ladder is fully open and stable before climbing.

INSPECT ladders regularly for defects or excessive wear.

X DO NOT stand on the top step.

DO NOT over reach from ladder. Move as required.

DO NOT wear high heels when climbing.

Step Stools

ENSURE that:

- † the surface of each step is non-skid;
- † casters on step stools retract when stool is stepped on;
- † the base is wider than the top to prevent tipping;
- † surface of step stool is slip resistant.

DO NOT USE a chair or box as a substitute for a ladder.

DO NOT place ladder against flexible or moveable surfaces.



10. Work Organization

Work organization determines what jobs to do and how to do them. Important components of good work organization are:

- † job design,
- † work pace,
- † training and education,
- † adjustment periods, and
- † rest breaks.

Job Design

Optimal job variety includes:

- † Use of a flexible scheduling system to avoid prolonged periods of intensive material handling.
- † Rotating of staff regularly during each shift among tasks available within their job description (task rotation).
- † Rotating of staff regularly during each shift to tasks normally done by staff of a different category (job rotation).

In all cases, employees must receive effective training for the tasks they perform.

Job Rotation

Job rotation involves design of tasks to ensure subsequent tasks do not stress similar muscles and joints.

In addition to a reduction in the risk of injury and fatigue, the benefits of job rotation include:

- † decrease in mental monotony;
- † increase in variety of work content;
- † better knowledge and understanding of other operations.

-
- | a break in exposure to environmental factors such as draft and noise;
 - | increased job security as people learn a variety of job skills.

Flexible Scheduling

- | Seasonal and regular peak work load conditions should be considered when scheduling staff.
- | Work such as shelving or concentrated tasks (e.g., computer work) may be scheduled during non-public hours.

Work Pace

Too fast a pace of work allows the body little recovery time between repetitive or forceful movements. This increases the risk of developing a WMSD.

Work Breaks

Work breaks are the times when we stop working on one task and start another, allowing us to use different parts of the body. Work breaks reduce the risk of WMSDs. For continuous VDT work, a work break of 5 to 15 minutes per hour is generally recommended.

Rest Breaks

Rest breaks are the times we stop working. Besides getting a refreshment, we should use this time to stretch and change body positions.

Adjustment Periods

An adjustment period is the time we need to get "in shape" when we return to our job after a long absence, or when we start a new job. It should allow us to build up muscle strength before we work at full capacity. The length of an adjustment period depends on the type of job.

Training and Education

Training should be an on-going activity within the library. While all employees should receive training in ergonomic issues, special attention should be given to:

- I new employees or employees changing jobs;
- I acquisition of new equipment;
- I implementation of new procedures or methods;
- I changes in technology;
- I employees returning to work after an injury.

The contents of ergonomic training for library workers should include risk factors that can cause WMSDs and work practices to prevent WMSDs. This would include:

- I description of material handling injuries and how they occur;
- I discussion of risk factors associated with library work;
- I understanding of library tasks and equipment that may be associated with an increased risk of injury;
- I alternatives to work methods and organization that can help reduce injuries;
- I demonstration of good working postures and why and how workstations may be adjusted to each individual;
- I guidelines for employees who begin to feel an injury;
- I discussion of procedures for acquiring new equipment and methods to make job tasks less demanding.

Sample Ergonomic Checklist

Work Organization

Does the person have a variety of tasks in a work day? ☐ Yes ☐ No

If YES, does the person have some control over the order in which the tasks are done? ☐ Yes ☐ No

Does the work occasionally involve horizontal reaches beyond 50cm or more? ☐ Yes ☐ No

Is there a lack of alternative tasks and flexibility in the job? ☐ Yes ☐ No

Is the job stressful? ☐ Yes ☐ No

Is new equipment ordered or are work methods altered without input from employees? ☐ Yes ☐ No

Does the work cause contact of fingers, wrists or arms with sharp edges? ☐ Yes ☐ No

Are employees carrying books and shelving with one hand? ☐ Yes ☐ No

Does the person have any control over the pace of work? ☐ Yes ☐ No

Are work cycles of a reasonable length so that work is not highly repetitious? ☐ Yes ☐ No

Is the workload reasonably constant? ☐ Yes ☐ No

If the person is a new staff member, or has returned recently from leave, did he or she have a period to adjust to the workload? ☐ Yes ☐ No

Does the person have any opportunity to participate in decision-making relevant to his or her work? ☐ Yes ☐ No

Are any tasks performed for more than 50% of the work time? ☐ Yes ☐ No

Is it difficult to take frequent breaks from repetitive tasks? ☐ Yes ☐ No

Workplace Design

Work Posture

Does the person have the choice to sit or stand at the work area? ☐ Yes ☐ No

Are unsupported postures adopted for long periods of time? ☐ Yes ☐ No

Does the work involve reaches behind the line of the body? ☐ Yes ☐ No

Is there enough space to allow freedom of movement at the work area?
(For example, when the person is seated, there should be enough space to move or stretch out legs.) ☐ Yes ☐ No

Standing

If the person is required to stand while working, the following questions are relevant:

Is a footrest available? ☐ Yes ☐ No

Is the floor surface appropriate? ☐ Yes ☐ No

Is a chair or stool provided? ☐ Yes ☐ No

Sitting

If the person is required to sit while working, the following questions are relevant:

Does the person find the seat comfortable? ☐ Yes ☐ No

Is it easy for the person to get into and out of the chair? ☐ Yes ☐ No

Does the seat height allow correct positioning of the legs?
(The person's thighs should be parallel to the floor with the feet resting on the floor or on a footrest). ☐ Yes ☐ No

Does the backrest adequately support the lumbar area? ☐ Yes ☐ No

Work Level Height

If the task requires considerable strength and/or a wide range of arm movements, is the work level slightly below the elbows? ☐ Yes ☐ No

Does the work prevent variations in posture between sitting, standing and sit-stand? ☐ Yes ☐ No

Work Layout

Can most of the work be performed with the upper arms in relaxed position close to the body? ☐ Yes ☐ No

Are all frequently handled items within easy reach? ☐ Yes ☐ No

Is the work area designed to prevent undue bending and/or twisting of the neck or trunk? ☐ Yes ☐ No

Does the work involve extreme flexation or extension of the wrist? ☐ Yes ☐ No

Does the work involve turning something over in the hands? ☐ Yes ☐ No

Does the work involve reaches above shoulder level
more than occasionally?

☐ Yes ☐ No

Physical Work Environment

Does the person find the lighting satisfactory?

☐ Yes ☐ No

Does the person find the noise levels acceptable?

☐ Yes ☐ No

Does the person find the temperature and airflow in the
workplace comfortable?

☐ Yes ☐ No

Is there a possibility of injury due to sharp corners or
rough surfaces?

☐ Yes ☐ No

Section V

Psychosocial Issues in Library Work

- 1. Psychological Stress**
- 2. Workplace Violence**
- 3. Stress and Violence Checklists**

1. Psychological Stress

Health, Safety and Well Being

The World Health Organization (WHO) defines health as follows:

"Health is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity"

Our health depends largely on the choices we make about our lifestyle and the surroundings in which we live and work. Surrounding has a broad meaning. It includes psychological, social, economic, spiritual, moral and environmental conditions.

Psychological Stress

Psychological stress is a mental condition of worry, anxiety, helplessness and oppression.

Causes of work-related psychological stress:

- I perception of unfair treatment by the employer;
- I excessive competition;
- I hazardous working condition;
- I long or unusual working hours;
- I exclusion;
- I threats of discipline;
- I threat of violence: physical, verbal gestures;
- I loss of income;
- I job insecurity;
- I too much work;
- I lack of job skills;
- I unfriendly social condition;
- I lack of control;
- I lack of reward: recognition, appreciation.

Sources of Stress Unique to the Library Workplace

Psychosocial issues are a factor in the work environment of libraries because:

- I some libraries may be located in unfriendly areas;
- I libraries are open during late evening hours;
- I libraries are open to a wide variety of people who may bring specific frustration, rage and other problems to the facility;
- I institutions may contribute to employee stress through various organizational factors (e.g., increasing job demands, downsizing or re-structuring);
- I excessive clerical work or workload;
- I high client expectations for fast service;
- I censorship issues (especially in school and public libraries);
- I continued need to monitor against theft, mutilation or destruction of library materials;
- I need to educate and monitor users on a wide variety of equipment;
- I dealing with equipment problems;
- I working directly and in clear visibility of library users;

Symptoms of Psychological Stress

Mental conditions can cause immediate (acute) as well as long-term (chronic) effects. Acute effects include feelings of:

- I anger,
- I depression,
- I sorrow,
- I humiliation,
- I worthlessness,
- I rejection,
- I being out of place,

-
- I incompetence, and
 - I helplessness.

Recovery from such effects may occur within days or months provided that the conditions are identified and changes are implemented. If stress-causing conditions are allowed to continue, it can cause one or both of the following situations:

- I Mental stress may trigger illness or worsen an existing illness.
- I Drug or alcohol addiction become a means of coping with stress.

The long-term effects of psychological stress include:

- I hypertension,
- I sleep disturbance,
- I chronic fatigue,
- I inability to relax,
- I angina,
- I peptic ulcers,
- I coronary heart disease, and
- I musculoskeletal problems.

In addition, stress has negative effects on interpersonal relationships, job satisfaction, productivity, quality of life, and family and leisure activities.

Preventive measures

- I Establish policies and procedures to minimize chances of unfair treatment.
- I Promote a participative approach to decision making.
- I Provide access to confidential medical and social assistance.
- I Match employees with jobs that suit their skill, interests and temperament.
- I Redesign jobs to reduce stress.

-
- I Provide social support system.
 - I Help troubled employees.

Individual Strategies for Coping with Stress

- I Maintain good health habits through proper diet, exercise and sleep habits.
- I Get organized: determine priorities and follow through.
- I Be creative and vary your work routine.
- I Allot time to yourself each day in order to unwind and relax.
- I Set limits to job demands.
- I Do not take on too many assignments.
- I Negotiate deadlines.
- I Use teamwork and increase avenues of communication.
- I Experiment with various relaxation techniques to determine which is best for you.
- I Acknowledge your successes and recognize that mistakes do not make you a failure.
- I Set reasonable demands for yourself and learn to delegate tasks when necessary.

2. Workplace Violence

What is Workplace Violence?

Most people think of workplace violence as a physical assault. However, workplace violence is a much broader problem. It includes any act in which a person is abused, threatened, intimidated or assaulted in his or her employment, for example:

- 1 **Threatening behaviour** – such as shaking fists, destroying property or throwing objects.
- 1 **Verbal or written threats** – any expression of an intent to inflict harm, including:
 - direct threats* – clear and explicit communication which distinctly indicates that the potential offender intends to do harm, e.g., "I am going to make you pay for what you did to me."
 - conditional threats* – involve a condition, e.g., "If you don't get off my back, you will regret it."
 - veiled threats* – usually involve body language or behaviours that leave little doubt in the mind of the victim that the perpetrator intends harm, e.g., "Do you think anyone would care if someone beat up the boss?"
- 1 **Harassment** – In general terms, harassment is any action, object or comment that another person finds offensive or harmful and that would be generally viewed by other people as unwelcome or offensive. Grounds for harassment include, but are not limited to, race, religion, age, sex, family status and disability.
- 1 **Verbal abuse** – including swearing, insults or condescending language.
- 1 **Physical attacks** – including hitting, shoving, pushing or kicking the victim, or inciting a dog to attack.

Forms of Workplace Violence

rumours	vandalism	psychological trauma
swearing	sabotage	anger-related accidents
verbal abuse	pushing	rape
pranks	theft	arson
arguments	physical assaults	murder
property damage		

Sources of Workplace Violence

fellow employees	customers	unauthorized intruders
supervisors	patrons/students	outside contacts
managers	members of the public	

Workplace violence is not limited to incidents which occur within a workplace. Work-related violence can also occur at off-site business-related functions, such as conferences, trade shows, or social events related to work, and in clients' homes. It can also include violence that occurs away from work, but resulting from work. For example, a social worker who receives a threatening telephone call from a client at his or her home is a victim of workplace violence.

Most jurisdictions with specific workplace violence prevention legislation have legal definitions of workplace violence. You should consult legislation applicable to your worksite.

Sources of Violence in Libraries and Preventive Measures

Source of Violence	Cause of Violence	Type of Violence	Examples of Preventive Measures
Violence by strangers	Under influence of drugs or alcohol Psychological distress	Bodily harm, robbery Vandalism Attempted theft / mutilation of library materials	Problem anticipation, appropriate training, access control Security system Post signs re security policy / patrols
Violence by facility users	Frustrated by perceived library related problems	Verbal abuse, threats, insults, bodily harm	Problem anticipation, appropriate training and other control measures
Violence by co-workers	Use of excessive authority by supervisors over subordinates Dispute between employees	Verbal abuse Insults Physical fights	Written violence prevention policy ensuring that all employees are treated fairly Training in conflict and dispute resolution Employee Assistance Program (EAP)
Violence arising out of personal relationships	Estranged spouses and partners Persons seeking revenge	Verbal abuse, threats, insults, bodily harm	Strict confidentiality of personal employee information (e.g. home address, work schedules) Controlled meeting rooms Controlled workplace access to employee relatives or visitors Flexibility in the use of leave, work schedules or transfers for troubled employee(s)

What Factors Increase the Risk of Workplace Violence?

Certain work processes, situations and interactions can put people at risk from workplace violence:

- † working with the public;
- † providing service, care, advice or education;
- † working alone or in small numbers;
- † having a mobile workplace (e.g., bookmobiles);
- † working during periods of intense organizational change (e.g., strikes, downsizing).

Risk of violence may be greater at certain times of the day, night or year:

- † the late hours of the night or early hours of the morning;
- † specific times of the day, days of the week or months:
 - tax return season,
 - overdue utility bill cut-off dates,
 - Christmas season in the retail market when demand for service is higher.
- † in times of certain business or organizational activities that may increase stress, such as:
 - report cards or parent interviews,
 - performance appraisals,
 - contract negotiations.

Risk of violence may be greater because of the geographic location of the library:

- † near buildings or businesses that are at risk of violent crime, e.g., bars, banks or certain social service agencies;
- † in a location likely to be accidentally visited by violent, criminal, intoxicated or drugged persons;
- † in high crime or dense manufacturing areas;
- † isolated from other buildings or structures.

What Should a Workplace Violence Prevention Policy Say?

Every library should have a workplace violence prevention policy developed by management in consultation with the employees. The purpose of the policy is to clearly communicate management's commitment to preventing workplace violence, and to provide an overview of your library's workplace violence prevention program.

The policy should establish clear standards of behaviour and require prompt, appropriate responses. The policy should apply to management, employees, clients, independent contractors and anyone who has a relationship with your library.

How to write a workplace violence prevention policy

DEFINE what you mean by workplace violence in precise, concrete language.

PROVIDE clear examples of unacceptable behaviour (verbal and written threats, harassment, physical intimidation or assault) and working conditions (working late or working alone without acceptable safeguards).

STATE in clear terms your library's view toward workplace violence and its commitment to the prevention of workplace violence.

PRECISELY state the consequences of making threats or committing acts of violence. For example,

Within a workplace, consider when to apply verbal or written reprimands, suspend or terminate employment, transfer the employee or take legal action.

For organizations which provide services to the public (like libraries), consider when to apply reprimands, temporarily or permanently withdraw services, or take legal action.

OUTLINE the process by which preventive measures will be developed.

ENCOURAGE reporting of all incidents or potential incidents of violence.

OUTLINE the confidential process by which employees can report incidents and to whom.

PROVIDE assurance that reprisals will not be made against reporting employees.

OUTLINE the procedures for investigating and resolving complaints.

DESCRIBE how information about potential risks of violence will be communicated to employees.

MAKE a commitment to provide support services to victims of violence.

OFFER a confidential Employee Assistance Program (EAP) to allow employees with personal problems to seek help.

MAKE a commitment to fulfil the violence prevention training needs of different levels of personnel with your library.

MAKE a commitment to monitor and regularly review the policy.

STATE applicable regulatory requirements.

Once your violence prevention policy has been developed:

PROVIDE training and orientation sessions on the policy.

DISTRIBUTE the policy widely. Managers, supervisors, co-workers, clients, and visitors must be aware of your policy.

CONSIDER integrating the violence prevention policy into your collective agreement.

Conducting a Workplace Violence Hazard Assessment

Evaluate the history of violence in your library

Ask employees about their experiences, and whether they are concerned for themselves or others.

EDUCATE staff to increase their awareness of violence issues and to help them recognize incidents or situations which should be reported.

EMPHASIZE that perceived or real threats of violence, near-misses and actual incidents of physical violence are all important.

SURVEY every employee.

USE interviews, a short questionnaire, or a checklist.

SURVEY all shifts if you have more than one shift.
Analyze the results separately, as trends may vary.

USE small discussion groups to generate more ideas.

SHARE the results of your review. This knowledge may prompt the identification of other relevant situations or incidents.

Review any incidents of violence by consulting:

- I existing incident reports,
- I first aid records, and
- I health and safety committee records.

Determine whether your library has any of the identified risk factors associated with violence.

- I work processes, situations or interactions (working alone, working with the public, handling cash),
- I occupational groups,
- I time of the day, night or year, or
- I geographic location.

***Conduct a visual inspection of your library
and the work being carried out, including:***

- workplace design and layout,
- administrative practices (e.g., library user policy),
and
- work practices.

For comprehensive prevention tips refer to CCOHS' "Violence in the Workplace Prevention Guide".

Evaluate the history of violence in other libraries

SEEK advice from:

- a local security expert,
- insurance associations, and
- workers' compensation board.

REVIEW relevant publications, including industry specific journals.

CONTACT your regional or national safety councils.

CONTACT your provincial or state, equivalent crime prevention associations.

CONTACT your professional association.

COLLECT newspaper or magazine clippings relating to violence in libraries.

***Contact legislative authorities to determine if
specific legislation regarding workplace
violence prevention applies to your library.***

Refer to CCOHS' "Violence in the Workplace Prevention Guide" for general information on workplace violence prevention legislation in Canada and the United States.

Organize and review the information you have collected.

Look for trends. Identify occupations and locations which are most at risk. Look for:

- frequency of occurrence of violent situations,
- types of potentially violent situations,
- occupational groups at risk, and
- locations with high risk.

How many of the incidents involved:

- verbal abuse or threats?
- physically threatening behaviour?
- harassment?

Is there a time of day, month or year when incidents of violence have occurred more often?

Categorize the degree of hazard for different areas or occupations.

high hazard – one or more contributing factors frequently place the employee at serious risk and/or the risk is severe.

moderate hazard – the employee is at risk on a less frequent basis and/or the risk is less than severe.

low hazard – employees are rarely or never exposed to risk and/or the risk is minimal.

Record the results of your assessment.

Use this document to develop a prevention program and specific recommendations for reducing the risk of violence within your library.

Routinely update your assessment.

ESTABLISH a schedule for assessment reviews, e.g., annually.

CARRY out a new hazard assessment if there is a significant change in your library:

- ▮ a major change in operations, e.g., adding a new shift or merging two operations;
- ▮ a major change in physical design of the library;
- ▮ a major increase or decrease in the number of staff;
- ▮ changes in the local environment or the nature of neighbouring businesses or services which can affect your library;
- ▮ a change in location of the library.

Developing Preventive Measures

COMMUNICATE the results of your hazard assessment and prevention plan to all employees.

EXPLAIN the hazards that were identified.

DESCRIBE the changes that are to be made.

EXPLAIN how the changes are expected to prevent workplace violence.

EMPHASIZE the positive, preventive aspects of your program.

Refer to CCOHS' "Violence in the Workplace Prevention Guide" for comprehensive violence prevention advice.

The following are examples of safety tips for some situations with risk of violence in a library setting.

Working Alone

Organizational and other factors often require library workers to work late hours or alone.

"Working Alone" includes employees who work by themselves without close or direct contact with co-workers. A librarian staffing a single person library or branch may be considered a "lone" worker.

Administrative Tips



AVOID having employees work alone in areas of recognized risk.

PUT more experienced employees on higher risk shifts or in higher risk areas if using a second employee is not feasible.

PROVIDE the employee with a means of emergency communication (e.g., a cellular phone) and check its proper operation at the beginning of the shift and at least once during the shift.

POST emergency numbers.

CHECK on the well-being of the employee by using established periodic check-in procedures.

MAKE arrangements with other company locations, adjacent merchants or security firms to monitor your employee.

ENSURE that a qualified person will respond immediately to signs of distress.

PROMINENTLY display signs indicating that the premises are monitored.

Safety Tips For Employees



KNOW the staff in other area stores, offices, or businesses and be aware of their schedules.

NOTIFY the police and staff in neighbouring stores or businesses if you are suspicious of people hanging around or of strange phone calls.

CHECK all lighting before it gets dark.

USE personal alarms or monitored video surveillance systems and properly maintain these devices.



DO NOT OPEN back or secondary doors unless absolutely necessary.

DO NOT LEAVE back or secondary doors unlocked, open and/or unattended.

DO NOT MENTION you are alone. Develop a method for suggesting that you are not working alone. Use words such as "we" or "my partner and I".

Working Late

Ensure someone knows you are working late



INFORM a security guard or a friend if you are working late and when you expect to leave.

USE established check-in procedures.

USE the "buddy system". Arrange to work late the same night as a colleague or friend.

ENSURE that all doors and windows are locked and make sure washrooms and storage rooms are empty.

MOVE your car to a well-lit area, close to the building or a parking lot attendant.

CALL police or security officers if you suspect someone is lurking outside.

PLAN ahead which safe places you can retreat to and call for help.

INDICATE that you are not alone. Say "my supervisor will be right here and will be able to help you".

ASK your employer to consider providing safe transportation home after hours.



DO NOT call out if you suspect a suspicious person is in a washroom. Back out, go to a safe area with a lockable door and call for help.

Parking Lot Safety



PARK near the building in a highly visible and well-lit area.

PARK near the attendant or exit if you use underground parking lots.

USE the main entrance. Avoid rear or secluded entrances and exits.

KEEP valuables, including purses, out of sight in your car.

BE prepared when you leave the library or your vehicle.

HAVE access to:

- keys to lock or unlock doors,
- the key to open your vehicle, and
- a whistle or other personal alarm.

POSITION the correct key to open the door lock as you approach your vehicle.

AVOID anyone loitering near your vehicle and walk to a safe place such as a lighted store, house or other building.

CHECK in, and around, your vehicle before you get in.

ENSURE all doors are locked and windows are up, once you are in your vehicle.

WALK to and from your car with another person or a security officer.

PROVIDE your escort with a ride back to the main entrance.



DO NOT walk to your vehicle alone, after dark, in a high risk neighbourhood.

If you must walk to your vehicle alone:

- 1 Have a co-worker watch you from a window.
- 1 Wave to him or her on the way to your vehicle.
- 1 Pretend you are being watched and wave to an imaginary co-worker.

SCAN the area for menacing individuals before you leave your vehicle or the library.

HAVE a back-up plan if there is danger.

When walking to, or from, your vehicle:

- 1 Keep your head erect.
- 1 Be alert and scan your route.
- 1 Proceed directly and quickly.
- 1 Be prepared to roll under the vehicle in the event of trouble.

KNOW the location of emergency telephones.

Administrative Tips for Violence Prevention



DISCUSS the handling of difficult patrons/situations in staff meetings.

MAINTAIN an incident log that encourages staff to share information about problem patrons.

POST a list of unacceptable behaviours in conspicuous places in the library.

DEVELOP good relations with local police or security officers.

FOLLOW-UP any incident with an incident report that is forwarded to the administration.

DEVELOP a procedure manual or similar such document that provides guidance to staff on how to deal with problem behaviours and potentially violent situations.

-
- POST notices regarding security patrols.
 - ESTABLISH a "safe" room for library employees.
 - ENSURE that a security officer is on duty at all times (especially in large libraries).
 - ENSURE that periodic training takes place.
 - CONDUCT a security audit.
 - ENSURE that a communication system is in place to alert staff that there is a disturbance in the library.
 - CONSIDER banning persistent trouble makers.
 - STUDY user behaviour patterns to see how users are using the facility.
 - DEVELOP a patron behaviour manual.
 - ENSURE that there are staff phones available throughout the library.
 - CONSIDER limiting access to restrooms and other isolated areas.
 - INSTALL security cameras and other silent alarms or 'panic buttons' in selected areas.

Reporting and Investigating Workplace Violence

Every workplace should have a system set up for reporting, recording, and investigating incidents or possible incidents of violence.

Reporting Workplace Violence

All incidents of violence, real or threatened, must be reported, including verbal or written harassment, or acts of physical violence. Reporting employees must not fear criticism, loss of privacy, penalties or judgement.

Depending on the needs of your library, you should consider developing a form to facilitate reporting of incidents.

On the report, name who the incident report should be sent to and who is responsible for investigating the incident. Supervisors and employees must be aware of the importance of and the process for reporting incidents.

Investigating Workplace Violence

The credibility of any violence prevention program depends in part upon how quickly and effectively reports are handled. It is therefore very important that your library determine who will investigate reports of violence before any incidents occur.

Workplace violence investigation may have serious legal consequences and should only be assigned to those with the appropriate skills, experience and authority. Special training is normally required.

Libraries without qualified in-house staff should consider retaining an independent external service provider to assist in the evaluation and investigation of all reports of violence.

In many situations, it may be appropriate for staff such as human resources professionals and supervisors to respond to certain incidents (e.g., angry comments or pranks). It is essential that the responder be properly trained to handle the incidents reported to them.

In more serious cases, a qualified and experienced professional workplace violence investigator should investigate the incident. If your library does not have qualified in-house staff, PRIOR arrangement should be made to contract with an external service provider to conduct the investigation.

It is important that the investigator convey fairness and objectivity. Investigations must be conducted with a full appreciation of the relevant legal and ethical considerations. The results of any investigation must be communicated to all of the staff involved in the incident; however, the individual's right to privacy must be respected.

Establishing an Emergency Response Plan

It is essential that your library has a specific plan which clearly outlines how to respond to emergency situations. The plan should address most incidents, but be easy to understand and remember.

Consider the following steps when developing your plan:

1. Determine how to secure the workplace.
2. Establish internal emergency numbers and/or code words to alert security or co-workers that urgent help is required.
3. Identify the circumstances in which a command centre would be necessary and how it would be set up.
4. Assign responsibilities for decision making and action to staff with the appropriate skills and authority. Appoint alternates in case a key player is absent during an incident.
5. Provide clear guidelines to follow in various situations.
6. Provide the training necessary to respond to and defuse potentially violent situations.
7. Outline how supervisors are expected to respond to reported incidents of violence or harassment.
8. Identify scenarios where you would call for emergency services.
9. Identify who is responsible for contacting emergency services such as:
 - ! security.
 - ! the police.
 - ! emergency response personnel.
 - ! victim support resources.
 - ! other outside assistance.

-
10. Identify scenarios where you would "lock-down" (take refuge in a secure location) or evacuate the library.
 11. Develop a detailed evacuation plan and lock-down procedures.
 12. Rehearse evacuation and lock-down procedures, or any other drills for specific situations likely to be encountered at your library.
 13. Provide a system to account for the safety of all personnel.
 14. Set up procedures to:
 - provide immediate first aid and medical help,
 - deal with emergency staff and police, and
 - complete medical and legal reports.
 15. Establish procedures for the sensitive management of communications regarding the incident (e.g., informing members of the victim's family, internal communications, media relations)
 16. Provide police and fire departments with the physical plans of your work site.

CCOHS' "Violence in the Workplace Prevention Guide" provides practical advice for responding to workplace violence.

Providing Victim Support

After a violent incident, it is essential that the victim(s), other affected employees and, in some cases, the victim's family, obtain immediate counselling and trauma therapy. Early provision of victim support services will reduce the impact of a crisis.

Traumatized employees may require emotional support (e.g., critical incident stress management, post-traumatic incident counselling), job accommodations and/or medical treatment. Your library should identify resources to provide these services and develop procedures for making appropriate use of these resources when an incident occurs.

Individuals who may be affected by a traumatic event include:

- I the victim(s),
- I other employees (including some remote from the scene),
- I witnesses,
- I first responders,
- I family members, and
- I others connected to the trauma.

In situations with a particularly high risk of workplace violence, it may be appropriate to provide preventive trauma counselling. If people are aware that their reactions to an event are normal, the severity of the reaction may be reduced.

Immediately following a violent incident, victims should be offered:

- I medical attention,
- I informal debriefing, which allows victims to talk through their experience with their co-workers and supervisor,
- I formal debriefing with a skilled debriefer, if necessary,
- I voluntary and confidential trauma counselling or therapy by an independent, qualified professional,
- I time off work, which will vary as individuals react differently to different circumstances,
- I information regarding their rights,
- I assistance with compensation, insurance and/or legal advice,
- I on-going follow-up and treatment, as needed, and
- I co-worker support (group debriefing by a qualified professional).

Conducting Incident Follow-up

Incident follow-up involves taking a second look at the situation.

All incidents of violence should be classified according to key characteristics, such as:

- I location,
- I time,
- I working activity or interaction (e.g., working alone and/or working off-site),
- I type of incident,
- I outcome,
- I who was involved (e.g., co-worker, client, stranger), and
- I possible causes.

Once the incident has been classified, you should look for similarities or common patterns to identify new or previously undefined risk. For example, do the majority of incidents occur:

- I at a particular time of day (e.g., 1 to 4 a.m.)?
- I during a particular time of year (e.g., report card time, Christmas)?
- I inside or outside the library?

Providing Library Violence Prevention Training and Education

All employees need to understand:

- I your library's violence prevention policy;
- I their rights and responsibilities under any relevant legislation and library policy;
- I the scope of workplace violence and risk factors;
- I safe and appropriate responses to incidents or potential incidents, including how to obtain assistance;
- I procedures for reporting, investigating and documenting incidents or potential incidents;

-
- I the follow-up and support services that are available to them, in the event of a violent incident.

Training should be specific to the risk of each individual employee or occupational category and may cover the following:

- I warning signs that may precede a violent situation;
- I how to prepare a profile of a potentially violent client;
- I ways of preventing or defusing volatile situations or aggressive behaviour, including:
 - anger management,
 - mediation,
 - interpersonal skills,
 - conflict resolution,
 - behaviour management, and
 - assertiveness training.
- I stress management, relaxation techniques, and wellness training;
- I self-defence training;
- I crisis intervention.

Conducting Program Review

An annual program review should be conducted by management and employee health and safety representatives. The purpose of a program review is to evaluate how well your violence prevention program is working and to identify any necessary program changes.

- I List all incidents of violence which occurred in the past year.
- I List corrective actions taken following any violent incidents.
- I Cite specific changes in your violence prevention policy or procedures.

I Re-visit your hazard assessment.

- Consider any changes at your library or in industry trends.
- Re-do your employee survey and compare the results with those of previous surveys.

Using Community Resources

Consult your local police department or a security consultant to assist with the steps needed to prevent violence.

Consult Employee Assistance Programs (EAP), local human resource professional consultants and mental health agencies to assess the needs of individuals and organizations in preventing and dealing with violence.

3. Violence Checklists

Sample

Workplace Violence Inspection Form

Location _____ Building _____

Floor _____ Section _____

Date _____ Time _____

Name (optional) _____

Parking Lot

Are the entrances and exits well marked? ☐ yes ☐ no

Is the lot appropriately signed with security reminders
("lock your car", "security patrolled")? ☐ yes ☐ no

Is there sufficient lighting? ☐ yes ☐ no

Are alarms clearly marked? ☐ yes ☐ no

Is access to the lot controlled by pass cards? ☐ yes ☐ no

Have there been vehicle thefts from the parking lot? ☐ yes ☐ no

Library Perimeter

Is your library near any buildings or businesses
that are at risk of violent crime (bars, banks)? ☐ yes ☐ no

Is your library ever accidentally visited by violent,
criminal, intoxicated or drugged persons? ☐ yes ☐ no

Is your library located in a high crime area? ☐ yes ☐ no

Are there signs of vandalism? ☐ yes ☐ no

Is the library isolated from other buildings? ☐ yes ☐ no

Is there graffiti on the walls or buildings? ☐ yes ☐ no

Is the exterior of the library adequately lighted? ☐ yes ☐ no

Is the building entrance adequately lighted? ☐ yes ☐ no

Is the entrance to the library easily seen from the
street and free of heavy shrub growth? ☐ yes ☐ no

Are outside lights checked before dusk? ☐ yes ☐ no

Are there any overgrown shrubs or landscaping which
obstruct your view or provide a hiding place? ☐ yes ☐ no

Sample

Access Control

How many public entrances are there to your building?

Can the number be reduced?

☐ yes ☐ no

Is your building connected to any other building(s)?

☐ yes ☐ no

If yes, is there access control to your building?

☐ yes ☐ no

Is your building shared with other businesses?

☐ yes ☐ no

If yes, is there access control to your area(s)?

☐ yes ☐ no

Is there a system to alert employees of access by intruders?

☐ yes ☐ no

Are offices designed/arranged to distinguish public vs private spaces?

☐ yes ☐ no

Do you use coded cards or keys to control access to the building or certain areas within the building?

☐ yes ☐ no

Is there a system in place to minimize the distribution of keys/entry cards?

☐ yes ☐ no

Do you change codes/locks immediately if keys/cards are lost or misplaced?

☐ yes ☐ no

Security System

Do you have a security system at your location?

☐ yes ☐ no

If yes, is the system tested on a regular basis (monthly) to assure correct functions?

☐ yes ☐ no

Is the existing security system effective based on past performance?

☐ yes ☐ no

Are there security guards/safety walking services available at your location?

☐ yes ☐ no

Have you posted signs indicating there is a security system in use?

☐ yes ☐ no

Are security cameras and mirrors placed in locations that would deter potential offenders?

☐ yes ☐ no

Signage

Upon entering the library are there signs to identify where you are?

☐ yes ☐ no

Once in the building are there signs showing you where to get emergency assistance if needed?

☐ yes ☐ no

If no, what signs are needed and where? _____

Are visitor areas and private areas clearly marked?

☐ yes ☐ no

Sample

- Are rules for visitors clearly posted? ☐ yes ☐ no
- Are there exit signs? ☐ yes ☐ no
- Are there areas where exit signs are not present but are needed? ☐ yes ☐ no
- If yes, where? _____
- Are signs posted to be highly visible to all? ☐ yes ☐ no
- If no, where are these signs? _____
- Are the hours of operation adequately posted? ☐ yes ☐ no
- Impression of overall signage:
☐ very poor ☐ poor ☐ satisfactory ☐ good ☐ very good
- What other signs should be added? _____

Work Practices

Do you or any of your co-workers:

- work with the public? ☐ yes ☐ no
- handle money? ☐ yes ☐ no
- provide service, care, advice or education? ☐ yes ☐ no
- work with unstable or volatile persons? ☐ yes ☐ no
- work alone or in small numbers? ☐ yes ☐ no
- work in community-based settings? ☐ yes ☐ no
- work during the late hours of the evening? ☐ yes ☐ no

Note: If you have answered "yes" to any of the above work practices questions, you should consider auditing your library's procedures using the advice provided in CCOHS' "Violence in the Workplace Prevention Guide".

Lighting

List areas where lighting was a concern (too dark or too bright) during the inspection.

- Is the lighting evenly spaced? ☐ yes ☐ no
- Are there any lights out? ☐ yes ☐ no
- If yes, where? _____
- Can you access main light control switches? ☐ yes ☐ no
- If yes, where? _____

Sample

Stairwells and Exits

- Do exit doors identify where they exit to? ☐ yes ☐ no
- Are there places at the bottom of stairwells where someone could hide? ☐ yes ☐ no
- If yes, where? _____
- Is the lighting adequate? ☐ yes ☐ no
- Can lights be turned off in the stairwell? ☐ yes ☐ no
- Is there more than one route? ☐ yes ☐ no
- Are there any exit routes which restrict your ability to get away? ☐ yes ☐ no
- If yes, where? _____
- Do stairwell doors lock behind you
- During regular hours of operation? ☐ yes ☐ no
- After regular hours of operation? ☐ yes ☐ no

Possible Entrapment Sites

- Are there unoccupied rooms that should be locked? ☐ yes ☐ no
- If yes, where? _____
- Are there small, well defined areas where you would be hidden from the view of others, such as:
- ☐ Recessed doorways ☐ Unlocked storage areas
- ☐ Stairwells ☐ Elevators
- ☐ _____ ☐ _____

Natural Surveillance

- Are there physical objects/structures that obstruct your view? ☐ yes ☐ no
- If yes, could someone hide behind such objects/structures? ☐ yes ☐ no
- If so, where? _____
- Are windows kept clear of advertising displays or other items that obstruct view? ☐ yes ☐ no
- What would make it easier to see?
- ☐ transparent materials like glass ☐ mirrors
- ☐ windows in doors ☐ angled corners
- ☐ less shrubbery ☐ other _____
- Do members of the public only approach staff from the front? ☐ yes ☐ no

Sample

Working Alone

At the time of the inspection did any areas feel isolated? ☐ yes ☐ no

If yes, what areas? _____

In these areas, is there a telephone or a sign directing you to emergency assistance? ☐ yes ☐ no

In these areas, how far is the nearest person to hear calls for help? _____ ft/m

Do you have alarms or panic buttons installed? ☐ yes ☐ no

Are the alarms or panic buttons easily accessible? ☐ yes ☐ no

Do you periodically check the functioning of alarms or panic buttons? ☐ yes ☐ no

How many people (other than fellow inspectors) were there around you at the time of this inspection? _____

Is it easy to predict when people will be around? ☐ yes ☐ no

Movement Predictors

How easy would it be for someone to predict your patterns of movement?

☐ very easy ☐ somewhat obvious ☐ no way of knowing

Is there an alternative well-lit and frequently travelled route available? ☐ yes ☐ no

Can you tell what is at the other end of each walkway or corridor? ☐ yes ☐ no

If no, where? _____

In walkways/corridors are there corners or alcoves where someone could hide and wait for you? ☐ yes ☐ no

If yes, where? _____

Elevators

Do you have full view of whether the elevator is occupied before entering? ☐ yes ☐ no

Is there an emergency phone or emergency call button in each elevator? ☐ yes ☐ no

Is there a response procedure for elevator emergencies? ☐ yes ☐ no

Washrooms

Is public access to washrooms controlled? ☐ yes ☐ no

Can the lights in the washrooms be turned off? ☐ yes ☐ no

Are washrooms checked before building is vacated? ☐ yes ☐ no

Sample

Interview Rooms

- Do you have a separate meeting room? ☐ yes ☐ no
- If yes, is natural surveillance possible? ☐ yes ☐ no
- Is there an alarm system in this room? ☐ yes ☐ no
- Is the furniture arranged to allow emergency exits? ☐ yes ☐ no

Individual Offices

- Are certain employees at higher risk of violence? ☐ yes ☐ no
- Has their furniture been arranged to:
- allow a quick exit from the office? ☐ yes ☐ no
 - maintain a minimum distance (approx. 4-6 feet) between themselves and the client? ☐ yes ☐ no
- Have they reduced the number of objects that can be used as missiles or weapons? ☐ yes ☐ no
- Do these offices have good natural surveillance through the use of shatterproof glass in walls/doors? ☐ yes ☐ no

Emergency Assistance

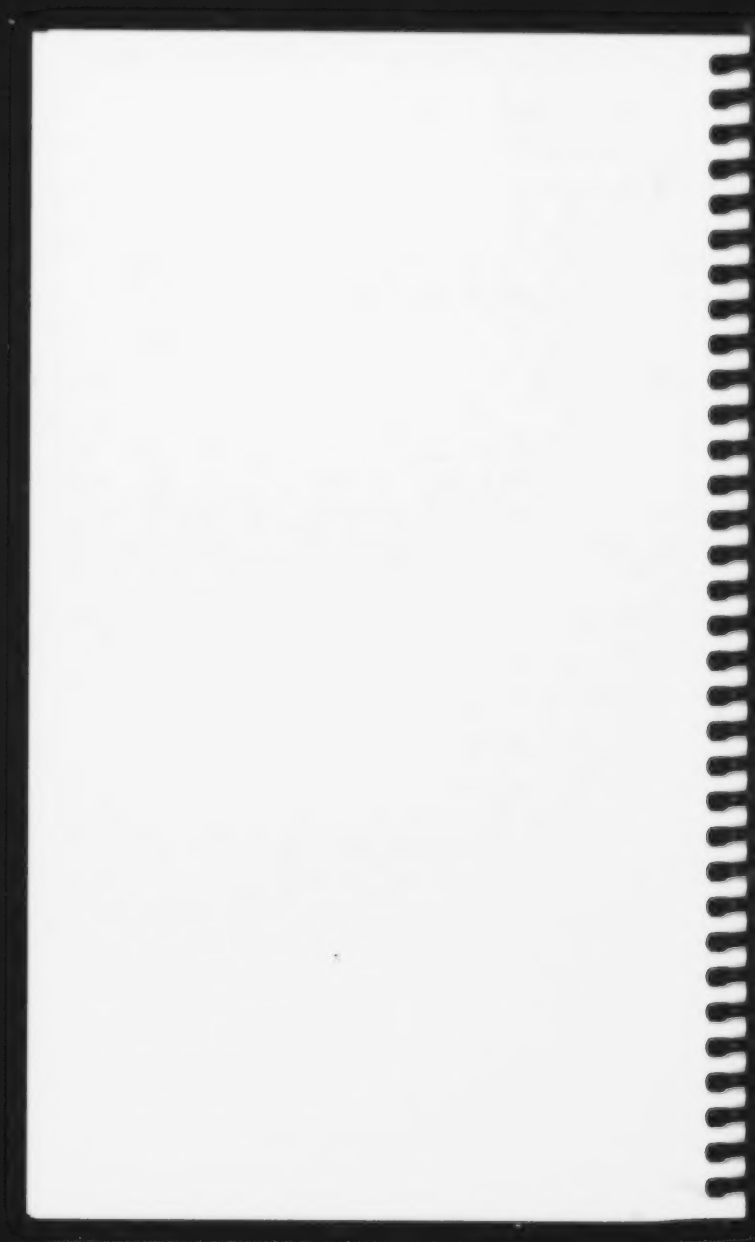
- Has an emergency contact number been established During regular hours of operation? ☐ yes ☐ no
- After regular hours of operation? ☐ yes ☐ no
- Are emergency numbers posted on phones? ☐ yes ☐ no
- Are emergency phones accessible in all areas? ☐ yes ☐ no
- If no, where is access needed? _____
- Do you have a designated "safe" room where employees can go during an emergency? ☐ yes ☐ no
- Does this room have a telephone and a door which can be locked from the inside? ☐ yes ☐ no

Training

- Have employees been trained in:
- appropriate responses for violent situations that they may encounter? ☐ yes ☐ no
 - the procedures for reporting suspicious persons or incidents? ☐ yes ☐ no

Areas of Improvement

	very safe	safe	neutral	unsafe	very unsafe	N/A
parking lot						
perimeter of library						
main/front entrance						
other entrances						
elevators						
stairwells						
corridors/hallways						
on your floor						
at your desk						
other						



Section VI

Emergency Preparedness

- 1. Fire Safety**
- 2. Bomb Threats**
- 3. Emergency Evacuation Procedures**

Emergencies

Library workers should be prepared for a variety of types of emergencies that may occur in libraries. An emergency preparedness plan detailing evacuation and other procedures should be in place for dealing with:

- fire,
- bomb threats, and
- building evacuation.

The Canadian Standards Association, the National Fire Protection Association and the American National Standards Institute are good sources of information for the development of an emergency preparedness plan.

1. Fire Safety

A library facility must comply with specific fire codes. A fire code is a basic fire prevention guide. For assistance consult your local fire department.

Classification of Fires

Fires are of four types:

CLASS A: involve burning of ordinary materials such as wood, cloth and paper.

CLASS B: involve burning of flammable liquids and gases such as paint, gasoline and natural gas.

CLASS C: involve energized electrical equipment. The fuel burning could be A, B, or D.

CLASS D: involve combustible metals such as magnesium, titanium, zirconium and sodium.

Fire Extinguishers

CAUTION: Do not use fire extinguishers if you are not trained to use them

CLASS OF FIRE	TYPE OF FIRE	APPROVED FIRE EXTINGUISHER
 ORDINARY COMBUSTIBLES	A Wood, paper, cloth	Type A; Type A-B
 FLAMMABLE LIQUIDS	B Gasoline, paints, oils, grease	Type A-B; Type B-C; Type A-B-C
 ELECTRICAL EQUIPMENT	C Electrical wiring, fuse box	Type B-C; Type A-B-C
 COMBUSTIBLES METALS	D Metals	Bucket of Sand



SELECT and locate fire extinguishers according to:

- I the type of potential fire hazard,
- I the degree of hazard, and
- I the area to be protected.

FOLLOW inspection. Check and test procedures as required in the fire code.

LOCATE extinguishers according to fire regulations and National Fire Protection Association Standards.

PRACTICE use of fire extinguishers.

ORGANIZE annual emergency response drills.



DO NOT OBSTRUCT or obscure fire extinguishers from view.

DO NOT ATTEMPT to handle fires beyond your capabilities. Leave fire to fire department experts.

Use of Fire Extinguishers for small fires

Small fires can be put out using portable fire extinguishers. You should be trained in order to be able to use fire extinguishers. The type of extinguisher to be used depends on the type of fire.

2. Bomb Threats

When a bomb threat is received:



TAKE all threats seriously.

BE CALM and courteous.

LISTEN carefully.

OBTAIN as much information as possible (who, what, where, when, how and why).

KEEP the caller on the line, if you can, by asking questions, or asking him or her to repeat the information.

NOTE voice characteristics and any background noises. Also what does the caller appear to know about the library?

NOTIFY responsible authority by prearranged signal while the caller is online.

RECORD the information on the Sample Bomb Threat Report Form (p. 131).

INFORM security, police and fire department.



DO NOT interrupt the caller.

Factors to be considered in determining appropriate levels of response include:

- I A judgement of severity of threat.
- I Any existing labour problems or known disgruntled employees.
- I Previous threats received.
- I Recent attacks against other facilities in the area.

During a bomb threat evacuation:



SEARCH your immediate area.

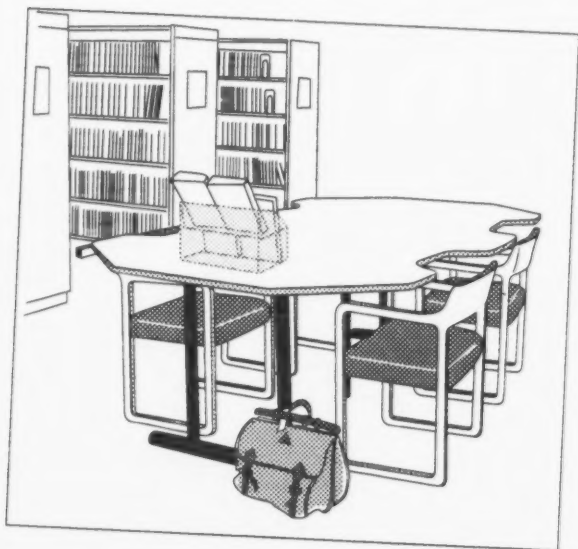
UNLOCK drawers, cabinets, etc. for the search crew and identify any strange or unfamiliar objects.

TAKE your personal property with you e.g., briefcase, purse, lunch container.

FOLLOW standard evacuation procedures.



DO NOT touch any suspicious object or device.
Report only.



Bomb Threat Report Form (Responding to a bomb threat over a telephone)

• LISTEN • DO NOT INTERRUPT THE CALLER • GET AS MUCH INFORMATION AS YOU CAN

Name: _____ Time: _____ Date: _____

Caller Identity: ☐ Male ☐ Female Age _____

Origin of Call: ☐ Local ☐ Long Distance ☐ Booth ☐ Internal

Voice	Speech	Language	Accent	Manner	Background
Loud	Fast	Excellent	Local	Calm	Office Machine
High Pitch	Distinct	Good	Not Local	Rational	Factory Equip.
Raspy	Stutter	Fair	Foreign	Coherent	Bedlam
Drunk	Slurred	Foul	Race	Deliberate	Animals
Soft	Slow	Poor	Regional	Righteous	Quiet
Deep	Distorted	Other	Other	Angry	Mixed
Pleasant	Nasal			Irrational	Street Traffic
Other	Other			Incoherent	Aircraft
				Emotional	Party Noise
				Laughing	Trains
				Other	Music
					Voices

Bomb Threat Questions

What is your name?

Time of Day:

When will the bomb go off?

Time remaining to detonation:

Where is the bomb planted?

Building:

What kind of bomb is this?

Area:

What does the bomb look like?

What is your location?

Why did you place the bomb?

How do you know about bombs?

Remember to KEEP CALLER TALKING and note the exact wording of threat.

3. Emergency Evacuation Procedures

Evacuation procedures may vary depending on the nature of the emergency. Below are some general guidelines:

Fire Evacuation

During evacuation:



REMAIN calm.

FOLLOW procedures established by your library.

DIRECT everyone to use the designated fire exists.

PROCEED quickly and directly to the designated meeting area.

REPORT to the attendance check.

RESPOND to small fires with fire extinguishers.

PREPARE to receive and direct fire fighters.

CHECK security at all exists.

ALWAYS report the alarm or actual fire to fire fighters and police before you become distracted or preoccupied.

Administrative Tips for Library Evacuation



TEST fire alarms, fire extinguishers and smoke detectors regularly.

INSPECT fire exists, ensure that signs are visible and illuminated with no obstructions by the exits.

DESIGNATE person (and designated alternative) who decides to evacuate.

IDENTIFY staff who will notify personnel to evacuate and how the message will be communicated.

ASSIGN responsibility for ensuring that everyone has been evacuated e.g. washroom, office and hallway checks.

DRAW UP evacuation routes and post this information in prominent locations.

IDENTIFY exit routes and specific precautions, which must be followed before everyone evacuates the building.

LOCK away valuables and confidential materials.

ASSIST employees with disabilities.

SHUT OFF specific equipment.

DETERMINE where everyone will meet once they have vacated the building.

ESTABLISH procedures for taking attendance of all personnel.

EMERGENCY, security and operations staff should be prepared in advance concerning evacuation policies and procedures.

TRAIN all employees in evacuation procedures.

PRACTICE your evacuation plan. Ensure that everyone responds to fire alarms and fire drills.

Bomb Threat Evacuation



REMAIN calm.

FOLLOW evacuation procedures as established by the library.

ASSIST library users to evacuate according to procedures established by your library.

PROCEED quickly and report to the designated area or individual.

Section VII

Safe Work Practices

1. Library safety
2. Manual Materials Handling
3. Basic Electrical Safety

1. Library Safety

Most library accidents result from slips, trips and falls, lifting objects, being caught in or between things, and punctures or cuts. The following table summarizes common safety concerns in a library.

Library Safety		
Safety Hazards	Causes	Preventive Measures
Trips, slips falls, sprains strains fractures	cluttered floors slippery patches trailing cables improperly stored materials open cabinets, drawers and doors	good housekeeping proper workplace layout safe work practices
Cuts and abrasions	poorly designed office equipment sharp edges on furniture/ equipment	properly designed tools and equipment
Burns/electric shock	faulty wiring, poorly wired electrical equipment electric heaters static electricity build up	electrical safety training routine safety checks safe handling procedures grounding
Headache drowsiness flu-like symptoms skin irritation shortness of breath	poor indoor air quality stress	improve ventilation system clean-up moulds and fungi minimize stress factors
Allergies	dust, moulds	housekeeping ventilation clean-up moulds and fungi

Filing Cabinet Safety



CLOSE cabinet drawers when not in use.

DO NOT OPEN more than one drawer at a time.

PLACE cabinets so that the drawers do not open into the aisles or walkways.

-
- LOAD cabinets starting from the bottom for stability.
 - SECURE cabinets to wall or floor.
 - USE handles to close drawers to avoid catching fingers.
 - AVOID overfilling cabinets to prevent paper and staple cuts.

-  DO NOT KEEP heavy objects on top of tall filing cabinets.

Floors and Stairs Safety

-  CLEAN up spills and tracked-in rain or snow.
- PICK objects up off the floor. Even paper, pencils and rubber bands can cause trips and falls.
- USE slip-resistance preparations on linoleum, tile, or other polished floor surfaces.
- SECURE carpets and rugs.
- USE handrails on stairs.
- REMOVE stairway distractions such as mirrors, decorations or posters.
- INSTALL mirrors at blind, busy corners.
-  DO NOT RUN, especially near corners.
- DO NOT STORE boxes, equipment, or supplies outside doorways or in aisles.
- DO NOT CARRY loads that obstruct vision.
- DO NOT participate in horseplay.

Office Equipment Safety

-  USE fingertip guards when handling paper.
- STORE pencils and pens point down or flat in drawers.
- SHEATH scissors, letter openers, razor blades or other sharp tools before storing.

USE paper cutters safely:

- † Keep knife blades in locked position.
- † Use proper guards.
- † Maintain firm grip on blade handle.
- † Do not cut too many papers at once.

USE staple removers to remove staples.

FILE sharp edges off metal furniture.

USE a proper ladder or stepping stools to reach high places. Do not use a box, desk or rolling chair.

Office Machines Safety



ENSURE proper guards are in place on machines.

OBSERVE directions and cautions when adjusting.

CALL service for repairs.

DISCONNECT frayed electrical cords or plugs and have them repaired.

UNPLUG equipment when not in use or before making adjustments.

2. Manual Materials Handling

Lifting boxes...



...from the ground

- 1** RAISE the item upright.



- 2** PUT one knee against the item.



- 3** PULL the item up your leg.



- 4** REST the item on the edge of your other knee.



- 5** STAND upright.



- 6** CARRY the load with your back in the upright position.



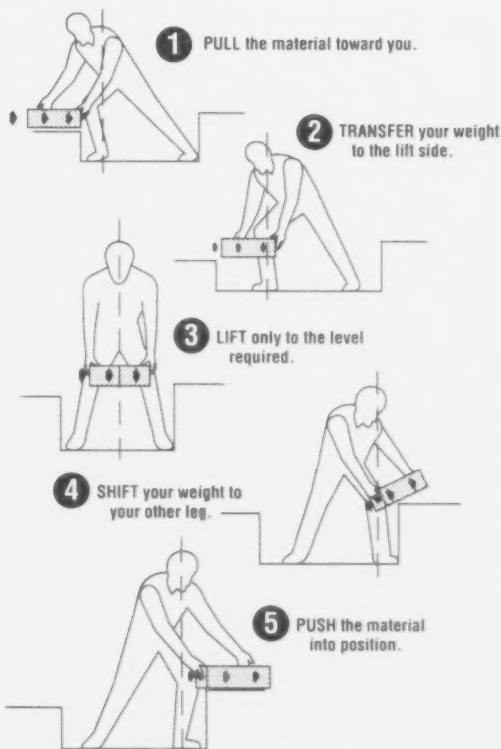
Transferring Weight

Use the following sequence of motions for moving heavy or bulky materials.

REDUCE the load on your back by *transferring* weight.

SHIFT your body weight from one leg to the other.

AVOID twisting your back.



3. Basic Electrical Safety



INSPECT power cords, and electrical fittings for damage prior to each use.

GET damaged equipment replaced or repaired by a qualified person. Only trained and qualified personnel (electricians with permits) should perform electrical work or repairs.

DISCONNECT and **LOCKOUT** power supply before making adjustments.

USE extension cords only to temporarily supply power to an area that does not have a power outlet.

KEEP power cords clear of tools/equipment during use.

DISCARD if worn or damaged. Have any cord that feels more than comfortably warm checked by an electrician.

ELIMINATE octopus connections.



DO NOT TIE power cords in knots; knots can cause short circuits and shocks. Loop the cords or use a twist lock plug.

DO NOT plug several power cords into one outlet.

DO NOT DISCONNECT power cord by pulling or jerking cord from the outlet. Pulling the cord causes wear and may cause a shock.

DO NOT use extension cords as permanent wiring.

DO NOT ALLOW carts and trolleys to pass over unprotected power cords. Cords should be put in conduit or protected by placing planks alongside them.

Section VIII

Personal Protective Equipment (PPE)

- 1. Determining the Need for PPE**
- 2. Foot Protection**
- 3. Respirators**

1. Determining the Need for Personal Protective Equipment (PPE)

Certain library tasks such as book package receiving, handling, carrying, custodial services and building maintenance work may require the use of personal protective equipment (PPE).

General Guidelines

Personal protective equipment (PPE) should meet standards that are specified in OH&S legislation.

Generally OH&S regulations required the use of PPE approved by CSA (Canadian Standards Association) in Canada and ANSI (American National Standards Institute) in the United States. You should consult your OH&S legislation to determine applicable standards in your workplace.

2. Foot Protection

Safety Footwear

Safety footwear protects your feet against injuries. Impact, compression and puncture are the most common types of injuries to the foot.

Wear safety footwear with metal box toe and puncture resistant sole while doing custodial or building maintenance work.

Match your choice of footwear to the hazard. In Canada, refer to CSA Standard Z195, "Protective Footwear." In the US, refer to ANSI Standard Z41-1999, "Personal Protection-Protective Footwear".

3. Respirators:

Protective Masks

Wear respirators as required by your employer while working in an environment where there is danger of breathing air contaminated with toxic gases, vapours, fumes and dusts.

The most common type of respiratory protective device that may be used in libraries is the disposable filter/dust mask. These are designed to protect employees from airborne mildew, allergens and dust produced by the routine cleaning of collections and shelves.



Section IX:

Health and Safety (OH&S) Policy and Program

- 1. Purpose**
- 2. Health and Safety Policy**
- 3. Health and Safety Program Elements**
- 4. Sample Checklist for An Occupational
Health and Safety Program**
- 5. Sample Health and Safety Policy Statement**

1. Purpose

A health and safety program is a definite plan of action designed to prevent accidents and occupational diseases. Some form of a program is required under occupational health and safety legislation in most jurisdictions. A health and safety program must include the elements required by the health and safety legislation as a minimum.

2. Health and Safety Policy

An organization's occupational health and safety policy is a statement of management's commitment and general rules that serve as guides for action. Senior management is responsible to ensure that the policy is carried out with no exceptions.

The policy statement can be brief, but it should mention:

- I Management's commitment to protect the safety and health of employees.
- I The objectives of the program.
- I The organization's basic health and safety philosophy.
- I Who is accountable for occupational health and safety programs.
- I The general responsibilities of all employees.
- I That health and safety shall not be sacrificed for expediency.
- I That unacceptable performance of health and safety duties will not be tolerated.

The policy should be:

- Stated in clear, unambiguous, and unequivocal terms.
- Approved by the board or authority responsible for the library.
- Signed by the incumbent Chief Librarian / Chief Executive Officer.
- Kept up-to-date.
- Communicated to each employee.
- Adhered to in all work activities.

3. Health and Safety Program Elements

The following are basic items of a health and safety program:

- Define health and safety of employees at all levels.
- Establish joint occupational health and safety committee or appoint a health and safety representative.
- Establish workplace health and safety rules.
- Establish correct work procedures for tasks.
- Include health and safety in new employee orientation package.
- Establish procedures for reporting unsafe conditions.
- Conduct workplace inspections.
- Establish procedures for reporting and investigating accidents and incidents.
- Have written emergency procedures and fire protection.
- Provide medical and first aid.
- Promote employee health and safety.

4. Sample Checklist for An Occupational Health and Safety Program

Sample

OH&S Program Checklist

<i>Program Element</i>	<i>YES</i>	<i>NO</i>
A written health and safety policy is in place		
Management provides leadership in health and safety matters		
Employees are aware of health and safety policies and developments		
Written procedures are in place for tasks		
Joint Health and Safety Committee is in place		
All controlled products in a workplace are marked with either a supplier or workplace label that meets WHMIS requirements. MSDS are readily available and proper training is provided		
Written incidents and accidents reporting procedures are in place		
Accident and injury records are maintained		
Employers are to provide personal protective equipment (and trained in the proper use of such equipment)		
First Aid facilities and trained first aid givers are available		
OH&S Training provided to new and transferred employees		
Is safety a factor when acquiring new equipment or changing a process?		
Do you annually review your OH&S program and make improvements as needed?		
Proper housekeeping measures are maintained		
Workplace violence policy and procedures in place		
EAP		
Security program		

5. Sample Health and Safety Policy Statement

The following is an example of an occupational health and safety policy statement:

Sample

ABC Library Health & Safety Policy Statement

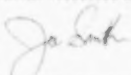
January 1, 2002

To All Employees:

At ABC library, the safety and health of our employees comes first. Management is committed to doing everything possible to prevent injuries and to maintain a healthy environment.

To this end:

1. All supervisors are responsible for ensuring that their employees are trained in approved work procedures to obtain optimal output without accidents and injuries and to ensure that employees follow safe work methods and all related regulations.
2. All personnel are required to support the OSH program and make safety and health a part of their daily routine, and to ensure that they are following safe work methods and relevant regulations.
3. All personnel will be held accountable for implementing this program.
4. All relevant laws and regulations are incorporated in our program as minimum standards.
5. All employees are responsible for working safely and for following the company's safety rules. Contact your supervisor, health and safety committee member or human resources department for further information.



Joe Smith, Chief Librarian
ABC Library

Section X

Occupational Health and Safety Legislation

1. Canadian Occupational Health
and Safety Legislation
Workplace Hazardous Material
Information System (WHMIS)
2. US Occupational Health and Safety
Legislation
3. Other Regulations and Codes Applicable
to Libraries

1. Canada Occupational Health and Safety Legislation

General Outline

The purpose of Occupational Health and Safety (OH&S) legislation is to protect you, the employee, against hazards on the job. It outlines the general rights and responsibilities of the employer, the supervisor and the employee.

The law makes both you and your employer jointly responsible for workplace health and safety legislation.

What does the OH&S legislation say?

Each of the provinces and the federal government have their own OH&S legislation. The details of the OH&S legislation vary slightly from one jurisdiction to another but the basic elements are the same.

Most Canadian jurisdictions have a general duty provision in their OH&S legislation which requires employers to take all reasonable precautions to protect the health and safety of employees.

1. Government's Responsibilities

To enforce occupational health and safety legislation to conduct workplace inspections.

- I To disseminate information.
- I To promote training, education and research.

2. Employee Rights and Responsibilities

Employee Rights:

- I to refuse unsafe work;
- I to participate in workplace health and safety activities through the Joint Health and Safety Committee (JHSC) or an employee health and safety representative; and

-
- I to know actual and potential dangers in the workplace.

Employee Responsibilities:

- I to work in compliance with the OH&S act and regulations;
- I to use personal protective equipment and clothing as directed by the employer; and
- I to report workplace hazards and dangers.

3. Supervisor's Responsibilities

- I To ensure that employees use prescribed protective equipment.
- I To advise employees of potential and actual hazards.
- I To take every reasonable precaution in the circumstances for the protection of employees.

4. Employer's Responsibilities

- I To establish and maintain a joint health and safety committee, or cause employees to select at least one health and safety representative.
- I To take every reasonable precaution to ensure the workplace is safe.
- I To inform employees about any potential hazards and provide training to work safely.
- I To provide personal protective equipment and ensure workers know how to use the equipment safely and properly.
- I To immediately report all critical injuries to the government department responsible for OH&S.
- I To train all employees on how to safely use, handle, store and dispose of hazardous substances and handle emergencies.

5. Joint Health and Safety Committee (JHSC)

- I Must be composed of management and employee representatives.
- I At least half the members of the committee must be employee representatives.
- I Must meet at least once every 3 months; 1 month in some jurisdictions.
- I Must be co-chaired by one management chairperson and one employee chairperson.
- I Employee representatives are elected or selected by the employees or their union.

6. Role of the Joint Health and Safety Committee

- I To act as an advisory body.
- I To identify hazards and obtain information.
- I To recommend corrective actions.
- I To assist in resolving work refusal cases.
- I To participate in accident investigations and workplace inspections.

7. Work Refusals

You can refuse work if you have reason to believe that the situation is unsafe to either yourself or your co-workers.

- I You must report to your supervisor that you are refusing to work and state why you believe the situation is unsafe.
- I You, your supervisor, and a JHSC member or employee representative will investigate.
- I You return to work if the problem is resolved.
- I If the problem is not resolved, a government health and safety representative is called.
- I Your supervisor may assign you reasonable alternative work.
- I The inspector will investigate the situation and give a decision.

Workplace Hazardous Materials Information System

WHMIS (Pronounced whimiss)

WHMIS applies to all Canadian workplaces. It requires that all workers who work with or near a hazardous substance (controlled product) be informed about its potential hazards and recommended safe work practices.

WHMIS requires that information be provided in three ways:

1. All controlled products used in the workplace must have a WHMIS label on the container.
2. Material Safety Data Sheets (MSDS) and hazard information must be readily available in the workplace. A MSDS summarizes the health and safety information about the product.
3. Workers must receive training to be able to recognize and work safely with chemicals.

The HAZARD SYMBOL is an important part of the WHMIS label. It warns the user that a particular hazard exists.

Actual hazards from toxic substances depend on the amount (level and duration) of exposure. A brief exposure at high levels may result in chemical poisoning within hours. Prolonged exposure at low levels may cause illness after several years.

WHMIS SYMBOLS AND CLASSES



CLASS A
Compressed Gas

Contents under high pressure. Cylinder may explode or burst when heated, dropped or damaged.



CLASS B
Flammable and Combustible Material

May catch fire when exposed to heat, spark or flame. May burst into flames.



CLASS C
Oxidizing Material

May cause fire or explosion when in contact with wood, fuels and other combustible material.



CLASS D, Division 1
Poisonous and Infectious Material:
immediate and serious toxic effects

Poisonous substance. A single exposure may be fatal or cause serious or permanent damage to health.



CLASS D, Division 2
Poisonous and Infectious Material:
other toxic effects

Poisonous substance. May cause irritation. Repeated exposure may cause cancer, birth defects, or other permanent damage.



CLASS D, Division 3
Poisonous and Infectious Material:
biohazardous infectious material

May cause disease or serious illness. Drastic exposures may result in death.



CLASS E
Corrosive Material

Can cause burns to eyes, skin or respiratory system.



CLASS F
Dangerously Reactive Material

May react violently causing explosion, fire or release of toxic gases, when exposed to light, heat, vibration or extreme temperatures.

2. US Occupational Health and Safety Legislation

General Outline

In the United States of America (USA) the Occupational Safety and Health Act is popularly known as OSHAct. The Occupational Safety and Health Administration (OSHA) is responsible for administering the OSHAct.

The OSHAct does not cover the following four categories of people:

- I self-employed persons;
- I farms which employ only immediate family members of the farm employer;
- I workers covered by other legislation; or
- I state and local government employees.

Regulations dealing with OSHA are published in Title 29 of the Code of Federal Regulations as:

- I 29 CFR Part 1910—Occupational Safety and Health Standards; and
- I 29 CFR Part 1926—Construction Standards.

These standards define exposure limits, exposure monitoring methods, medical surveillance and protective measures.

Duties of Employers

The OSHAct sets out two main duties for employers:

- I employers must provide a workplace which is free from hazards that are known to cause or likely to cause death or serious physical harm to employees; and
- I employers must comply with occupational safety and health standards under the Act.

Duties of Employees

Employees must comply with occupational safety and health standards, rules, regulations and orders which are applicable to their own conduct and actions.

Key Provisions

Some of the key provisions of the OSHA Act are to:

- † assure, insofar as possible, that every employee has safe and healthy working conditions;
- † require employers to maintain accurate records of exposures to potentially toxic materials or harmful physical agents and inform employees of the monitoring results;
- † provide for employee walk-around or interview of employees during the inspection process; and
- † provide procedures for investigating alleged violations, at the request of any employee or employee representatives, issuing citations and assessing monetary penalties against employers.

Hazard Communication

The intent of the OSHA Hazard Communication Standard is to provide employees with information and training about the potential health hazards from exposure to workplace chemicals. The Standard requires that employee training include:

- † explanations of the requirements of the standard;
- † identification of workplace operations where hazardous chemicals are present;
- † knowledge of the methods and observations used to detect the presence of hazardous workplace chemicals;
- † assessment of the physical and health hazards of those chemicals;
- † warnings about hazards associated with chemicals in unlabelled pipes;

-
- † descriptions of hazards associated with non-routine tasks;
 - † details about the measures employees can take to protect themselves against these hazards, including specific procedures;
 - † explanation of the labelling system;
 - † instructions on location and use of material safety data sheets (MSDSs); and
 - † details on the availability and location of the hazardous materials inventory, MSDSs, and other written hazard communication material.

Hazard Warning and Symbols

Chemicals produced in the USA come under OSHA Hazard Communication Standard. The label on the container must warn about potential hazards of the product. OSHA does not require hazard symbols on the label, however, the skull and crossbones symbol is acceptable on containers of highly toxic substances and the flame symbol is acceptable on containers of flammable substances.

3. Examples of Regulations and Codes Applicable to Libraries

Employee safety and health

Jurisdiction: Federal and provincial acts and regulations. State occupational safety and health codes. These safety codes cover a wide array of concerns such as safety of ladders and scaffolds; safe handling of hazardous materials; accident prevention; fire, safety, and emergency procedures; eye and face protection; insect and vermin control, etc.

Asbestos

Jurisdiction: Provincial and Federal Occupational and Safety Legislation in Canada and, in the United States, the Occupational Health and Safety Administration (OSHA) rules govern the handling and disposal of asbestos in abatement actions. State regulations vary and may be more stringent than federal requirements.

Ergonomics

Jurisdiction: Not clearly established. OSHA is proposing an ergonomics standard. Some states presently have ergonomic standards or guidelines. In Canada several provinces have legislation dealing with ergonomic issues. Please refer to the health and safety regulation applicable to your library. Refer to: CSA Standard Z412 (00), "Guideline on Office Ergonomic" and ANSI/HFS Standard 100-1988, "American Standard for Human Factors Engineering of Visual Display Terminal Workstations".

Workplace Violence

Manitoba, British Columbia and Saskatchewan have specific workplace violence prevention regulations.

For specific information, consult:

- Manitoba: Occupational Health and Safety Regulation 105/88R. "Workers Working Alone"
- Saskatchewan: Occupational Health and Safety Regulations, 1996 RRS, Section 37. "Violence"
- British Columbia: Industrial Health and Safety Regulation B.C. Reg 296/97, Sections 4.27-4.31. "Violence in the Workplace"

The Canada Labour Code specifies that employees with supervisory or managerial responsibilities take the prescribed steps to prevent and protect against violence in the workplace (Statutes of Canada, chapter 20, section 5). Regulations regarding workplace violence prevention are under development.

Other provinces also have regulations regarding working alone. In general, these regulations require that means of checking the well-being of the employee and/or for the employee to obtain emergency assistance be established. Contact your local regulatory authorities for specific advice.

US Violence Legislation

OSHA has published guidelines to assist employers in combating violence in the health care industry and for the night retail industry. Implementation of these guidelines by employers is voluntary.

Certain states have enacted specific legislation to combat workplace violence, for example:

California enacted specific legislation (S.B. 198) that requires businesses to have workplace injury prevention plans.

This legislation requires:

- † a workplace security hazard assessment,
- † assault reporting and investigation,
- † hazard correction,
- † employee training, and
- † an emergency action plan.

California also has a specific law to combat workplace violence in hospitals.

The Washington Industrial Safety and Health Act has specific regulations called "Late Night Retail Workers Crime Prevention." These regulations require implementation of:

- † robbery and crime prevention training, and
- † specific measures aimed at making the establishment less attractive to robbers.

Florida also has established retail violence legislation called the "Convenience Business Security Act."

This list is not intended to be comprehensive. Other states may have proposed or enacted specific violence legislation. Contact the regulators in your jurisdiction for specific advice.

General Violence Legislation

Most North American jurisdictions have legislation on stalking, threats, harassment and physical assault. Contact your local regulatory authorities to find out more about the specific laws applicable to violence in your jurisdiction.

Fungi, microbials and bioaerosols

Jurisdiction: Not clearly established with federal, provincial, state and local regulations, codes and guidelines. The EPA provides guidance on the investigation, evaluation and remediation of mould related problems. Health Canada and the Canadian Housing and Mortgage Corporation have additional information.

Fire protection

Jurisdiction: National, state/provincial and local levels of government are involved in enacting various legislation, regulations and codes pertaining to fire safety. The National Fire Code of Canada and the National Fire Protection Association (NFPA) in the United States provide guidance.

For libraries see specifically: NFPA 101, "Life Safety Code"; NFPA 910, "Protection of Libraries and Library Collections"; NFPA 10, "Standard for Portable Fire Extinguishers"; and NFPA 13A, "Inspection, Testing and Maintenance of Sprinkler Systems".

Indoor-air quality (office environment)

Specifically: Indoor air quality depends on adequacy of ventilation. Most building codes recommend the use of ASHRAE (American Society of Heating, Refrigeration and Air Conditioning Engineers) Standard 62-1989. Canadian Standards Association, Standard CSA Z209-94 recommends guideline for managing indoor Air Quality. These standards are listed below.

ASHRAE Standard 62-1999, "Ventilation for Acceptable Indoor Air Quality"; ASHRAE Standard 55-1992, "Thermal Environmental Conditions for Human Occupancy".

CSA Standard Z209-94, "Guideline for Managing Indoor Air Quality in Office Buildings".

Lighting

Jurisdiction: In Canada federal, provincial and territorial regulations may set out requirements for lighting in the workplace. In the United States federal and state codes may apply.

ANSI /IES RP1-1992, "Standard Practice for Office Lighting". Illumination Society of America Lighting handbook (9th Edition, 2000).

Sanitation/food service and restrooms

Jurisdiction: Local municipal, county, or state codes usually prevail. Occupational safety and health regulations, state or federal, regulate the sanitary requirements.

Section XI

Information Sources

1. Canadian Government Departments with Responsibility for Occupational Health and Safety
2. US Federal Safety and Health Agencies
3. State Occupational Safety and Health Plans

1. Canadian Government Departments Responsible for Occupational Health and Safety

Canadian Centre for Occupational Health and Safety (CCOHS)

Client Services

Phone: (905) 570-8094

Toll-free: 1-800-668-4284 (Canada and US only)

Fax: (905) 572-2206

E-mail: clientservices@ccohs.ca

Web Site: www.ccohs.ca

Inquiries Service

(free answers to your OH&S questions)

Phone: (905) 572-4400

Toll-free: 1-800-263-8466 (Canada only)

Fax: (905) 572-4500

E-mail: inquiries@ccohs.ca

OSH Answers Web Site: www.ccohs.ca/oshanswers

Federal Jurisdiction

Labour Program

Human Resources Development Canada

Ottawa ON K1A 0J2

Regional and District Offices

Web Site: <http://www.hrdc-drhc.gc.ca/menu/profile-search.shtml>

Provincial Jurisdictions

Alberta

Workplace Health and Safety

Alberta Human Resources and Employment

9940-106 Street

Edmonton, AB T5K 2N2

call centre: 1-866-415-8690

Fax: (780) 422-3730

E-mail: whs@gov.ab.ca

Web Site: www.gov.ab.ca/hre/whs/

British Columbia

Workers' Compensation Board of British Columbia

PO Box 5350 Stn Terminal
Vancouver, BC V6B 5L5
General Inquiries: (604) 273-2266
Toll-free: 1-800-661-2112
Fax: (604) 276-3247
Prevention Information Line
Phone: (604) 276-3100
Toll-free in B.C.: 1-888-621-7233 (SAFE)
Health and Safety Emergency Accident Reporting
Toll-free in B.C.: 1-888-621-7233 (SAFE)
After Hours Phone: 1-866-922-4357
Web Site: www.worksafebc.com

Manitoba

Workplace Safety and Health Division Manitoba Labour

200-401 York Avenue
Winnipeg, MB R3C 0P8
General Inquiries: (204) 945-3446
Toll free in Manitoba: 1-800-282-8069
After hours: (204) 945-0581
Fax: (204) 945-4556
Web Site: www.gov.mb.ca/labour/safety/

New Brunswick

Workplace Health, Safety and Compensation Commission of New Brunswick

500 Beaverbrook Court
Fredericton, NB E3B 5X4
General Inquiries: (506) 453-2467
Toll-free in NB: 1-800-442-9776
E-mail: prevention@whsccnb.ca
Fax: (506) 453-7982
Web Site: www.whscc.nb.ca/

Newfoundland and Labrador

Department of Labour

Confederation Building, 4th Floor, West Block
PO Box 8700

St. John's, NF A1B 4J6

General Inquiries: (709) 729-7420

Toll-free in NF: 1-800-563-5471

Fax: (709) 729-3445

Web Site: www.gov.nf.ca/labour/

Northwest Territories and Nunavut

**Workers' Compensation Board of Northwest
Territories and Nunavut**

PO Box 8888

Yellowknife, NT X1A 2R3

General Inquiries: (867) 920-3888

Toll free: 1-800-661-0792

Fax: (867) 873-4596

E-mail: yellowknife@wcb.nt.ca

Web Site: <http://www.wcb.nt.ca/home.htm>

Nova Scotia

**Nova Scotia Department of Environment and Labour
Occupational Health and Safety Division**

5151 Terminal Rd., 6th Floor

PO Box 697

Halifax, NS B3J 2T8

General Inquiries: (902) 424-5400

Toll free in NS: 1-800-952-2687

Fax: (902) 424-3239

E-mail: labrohs@gov.ns.ca

Web Site: <http://www.gov.ns.ca/enla/ohs/>

Ontario

Ministry of Labour

Occupational Health and Safety Branch

655 Bay St., 14th Floor

Toronto, ON M7A 1T7

General Inquiries: (416) 326-7770

Toll free in Ontario: 1-800-268-8013

Fax: (416) 326-7761
E-mail: webohs@mol.gov.on.ca
Web Site: www.gov.on.ca/LAB/main.htm

Prince Edward Island

**Workers' Compensation Board of PEI
Occupational Health and Safety Division**
PO Box 757, 14 Weymouth Street
Charlottetown, PE C1A 7L7
General Inquiries: (902) 368-5680
Toll-free in PEI: 1-800-237-5049
Fax: (902) 368-5705
Web Site: www.wcb.pe.ca

Québec

**Commission de la santé et de la sécurité du travail
du Québec (CSST) (Occupational Health
& Safety Commission)**
CP 6056, succursale Centre-ville
Montréal, PQ H3C 4E1
Phone: (514) 906-3060
Toll-free in PQ: 1-800-667-7585
Fax: (514) 906-3062
Web Site: www.csst.qc.ca

Saskatchewan

**Saskatchewan Labour
Occupational Health and Safety Division**
1870 Albert Street
Regina, SK S4P 3V7
General Inquiries: (306) 787-4496
Toll-free in SK: 1-800-567-7233
Fax: (306) 787-2208
Web Site: www.labour.gov.sk.ca/
Saskatoon Office:
Phone: (306) 933-5042
Toll-free: 1-800-667-5023
Fax: (306) 933-7339

Yukon Territory

Yukon Workers' Compensation, Health and Safety Board, Occupational Health and Safety Branch

401 Strickland Street

Whitehorse, YT Y1A 5N8

General Inquiries: (867) 667-5645

Toll free in the Yukon: 1-800-661-0443

Fax: (867) 393-6279

Web Site: <http://www.wcb.yk.ca>

For an up-to-date listing of information sources visit
<http://www.ccohs.ca/oshanswers/information/govt.html>

2. US Federal Safety and Health Agencies

US Environmental Protection Agency (EPA)

Ariel Rios Building
1200 Pennsylvania Avenue N.W.
Washington, DC 20460
Phone: (202) 260-2090
International Requests Fax: (202) 566-0544
Toll-free: 1-800-424-9346
Web Site: www.epa.gov

National Institute for Occupational Safety and Health (NIOSH)

4676 Columbia Parkway
Cincinnati, OH 45226
Publications Dissemination
Phone: (513) 533-8471
Fax: (513) 533-8573
Toll-free in the US: 1-800-35-NIOSH
(1-800-356-4674)
Outside the US: (513) 533-8328
E-mail: eidtechinfo@cdc.gov
Web Site: www.cdc.gov/NIOSH/homepage.html

Occupational Safety & Health Administration (OSHA)

200 Constitution Ave., NW
Washington, DC 20210
Phone: (202) 693-2000
Toll free: 1-800-321-OSHA (Emergency reporting)
Web Site: www.osha.gov
A listing of the Regional Offices follows:

OSHA Regional Offices

Region 1: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont, US Dept. of Labor—OSHA
JFK Federal Building, Room E340
Boston, MA 02203
Phone: (617) 565-9860

Fax: (617) 565-9827

Web Site: www.osha.gov/oshdir/r01.html

**Region 2: New Jersey, New York, and Puerto Rico,
Virgin Islands, USA Dept. of Labor — OSHA**

201 Varick St., Rm. 670

New York, NY 10014

Phone: (212) 337-2378

Fax: (212) 337-2371

Web Site: www.osha.gov/oshdir/r02.html

**Region 3: District of Columbia, Delaware,
Maryland, Pennsylvania, Virginia and West
Virginia, USA Dept. of Labor — OSHA**

The Curtis Center-Suite 740 West

170 S. Independence Mall West

Philadelphia, PA 19106-3309

Phone: (215) 861-4900

Fax: (215) 861-4904

Web Site: www.osha.gov/oshdir/r03.html

**Region 4: Alabama, Florida, Georgia, Kentucky,
Mississippi, North Carolina, South Carolina, and
Tennessee, USA Dept. of Labor — OSHA**

61 Forsyth St. SW

Atlanta, Georgia 30303

Phone: (404) 562-2300

Fax: (404) 562-2295

Web Site: www.osha.vog/oshdir/r04.html

**Region 5: Illinois, Indiana, Michigan, Minnesota,
Ohio, and Wisconsin, USA Dept. of Labor — OSHA**

230 South Dearborn St., Rm. 3244

Chicago, IL 60604

Phone: (312) 353-2220

Fax: (312) 353-7774

Web Site: www.osha.gov/oshdir/r05.html

**Region 6: Arkansas, Louisiana, New Mexico,
Oklahoma, and Texas, USA Dept. of Labor — OSHA**

525 Griffin St., Rm. 602

Dallas, TX 75202
Phone: (214) 767-4731
Fax: (214) 767-4693
Web Site: www.osha.gov/oshdir/r06.html

**Region 7: Iowa, Kansas, Missouri, and Nebraska,
USA Dept. of Labor—OSHA**

City Center Square
1100 Main St., Suite 800
Kansas City, MO 64105
Phone: (816) 426-5861
Fax: (816) 426-2750
Web Site: www.osha.gov/oshdir/r07.html

**Region 8: Colorado, Montana, North Dakota,
South Dakota, Utah, and Wyoming, USA Dept.
of Labor—OSHA**

1999 Broadway, Suite 1690
P.O. Box 46550
Denver, CO 80202-6550
Phone: (303) 844-1600
Fax: (303) 844-1616
Web Site: www.osha.gov/oshdir/r08.html

**Region 9: Samoa, Arizona, California, Guam,
Hawaii, Nevada, and Trust Territory of the Pacific
Islands, USA Dept. of Labor—OSHA**

71 Stevenson Street St.
4th Floor, Suite 420
San Francisco, CA 94105
Phone: (415) 975-4310
Fax: (415) 975-4319
Web Site: www.osha.gov/oshdir/r09.html

**Region 10: Alaska, Idaho, Oregon, Washington,
USA Dept. of Labor—OSHA**

1111 Third Avenue, Suite 715
Seattle, Washington 98101-3212
Phone: (206) 553-5930
Fax: (206) 553-6499
Web Site: www.osha.gov/oshdir/r10.html

3. State Occupational Safety and Health Plans

Alaska

Alaska Department of Labor

P.O. Box 21149

Juneau, Alaska 99801-1149

Physical location

1111 W. 8th Street, Room 304

Juneau, Alaska 99801-1149

Web Site: www.labor.state.ak.us/1ss/1ss.htm

Arizona

Industrial Commission of Arizona

800 W. Washington

Phoenix, Arizona 85007-2922

Telephone: (602) 542-4411

(602) 542-5795

Fax: (602) 542-1614

Web Site: <http://www.ica.state.az.us/ADOSH/oshatop.htm>

California

California Department of Industrial Relations

455 Golden Gate Avenue - 10th Floor

San Francisco, California 94102

Telephone: (415) 703-5050

Fax: (415) 703-5114

Web Site: http://www.dir.ca.gov/occupational_safety.html

Connecticut

Connecticut Department of Labor

Consultation Services

Division of Occupational Safety and Health

38 Wolcott Hill Road

Wethersfield, Connecticut 06109

Telephone: (860) 566-4550

Fax: (860) 566-6916

Web Site: <http://www.ctdol.state.ct.us/osha/osha.htm>

Hawaii

Hawaii Department of Labor and Industrial Relations

Consultation and Training Branch
830 Punchbowl Street
Honolulu, Hawaii 96813
Telephone: (808) 586-9100
Fax: (808) 586-9104
Web Site: <http://www.state.hi.us/dlir/hiosh/>

Indiana

Indiana Department of Labor Bureau of Safety, Education and Training

Division of Labor, Room W195
402 West Washington
Indianapolis, Indiana 46204-2287
Telephone: (317) 232-2688
Fax: (317) 232-3790
Web Site: <http://www.state.in.us/labor/iosha/iosha.html>

Iowa

Iowa Division of Labor Services Consultation Program

1000 E. Grand Avenue
Des Moines, Iowa 50319-0209
Telephone: (515) 281-7629 Consultation
Telephone: (515) 281-0202 Education
Fax: (515) 281-5522
Web Site: <http://www.state.ia.us/iwd/labor/index.html>

Kentucky

Kentucky Labor Cabinet

1047 U.S. Highway 127 South, Suite 4
Frankfort, Kentucky 40601
OSH Division of Compliance
Telephone: (502) 564-3070 ext. 305
Fax: (502) 564-4769
OSH Division of Education and Training
Telephone: (502) 564-3070 ext. 266
Fax: (502) 564-4769 FAX
Web Site: <http://www.kylabor.net/kyosh/index.htm>

Maryland

Maryland Department of Labor, Licensing and Regulation

1100 North Eutaw Street, Room 613

Baltimore, Maryland 21201-2206

Maryland Occupational Safety & Health (MOSH)

Telephone: (410) 767-2215

Fax: (410) 333-7747

Web Site: <http://www.dllr.state.md.us/labor/mosh.html>

Michigan

Michigan Department of Consumer and Industry Services, Bureau of Safety and Regulation

7150 Harris Drive

P.O. Box 30643

Lansing, Michigan 48909-8143

Telephone: (517) 322-1814

Fax: (517) 322-1775

Web Site: <http://www.cis.state.mi.us/bsr/>

Minnesota

Minnesota Department of Labor and Industry

443 Lafayette Road North

St. Paul, Minnesota 55155-4307

Telephone: (651) 284-5050

Fax: (651) 297-1953

Internet: <http://www.doli.state.mn.us/wsc.html>

Nevada

Nevada Division of Industrial Relations Occupational Safety and Health Enforcement Section (OSHES)

1301 N. Green Valley Parkway - Suite 200

Henderson, Nevada 89014

Safety Consultation and Training Section

Phone: 702-486-9140

Fax: 702-990-0362

Web Site: <http://dirweb.state.nv.us>

New Jersey

**New Jersey Department of Labor
Division of Public Safety and Occupational
Safety and Health**

225 E. State Street
8th Floor West
P.O. Box 953
Trenton, New Jersey 08625-0953
Telephone: (609) 292-3923
Fax: (609) 292-4409

Consultation Web Page:

[http://www.state.nj.us/labor/wps/psosh/onsite/
onsite.htm](http://www.state.nj.us/labor/wps/psosh/onsite/onsite.htm)

New Jersey State OSH Plan Web Page:

<http://www.state.nj.us/labor/isse/ispcosh.html>

New Mexico

**New Mexico Environment Department
Occupational Health and Safety Bureau**

525 Camino de Los Marquez, Suite 3
PO Box 26110
Santa Fe, New Mexico 87502
Telephone: (505) 827-4230
Fax: (505) 827-4422
Web Site: [www.nmenv.state.nm.us/OHSBwebsite/
ohsb-home.htm](http://www.nmenv.state.nm.us/OHSBwebsite/ohsb-home.htm)

New York

New York Department of Labor

W. Averell Harriman State Office Building-12
Room 500
Albany, New York 12240
New York On-Site Consultation Program
State Office Campus Building 12, Room 168
Albany, New York 12240
Telephone: (518) 457-2238
Fax: (518) 457-3454
Web site: [http://www.labor.state.ny.us/working_ny/
worker_rights/safety_health.html?](http://www.labor.state.ny.us/working_ny/worker_rights/safety_health.html?)

North Carolina

North Carolina Department of Labor (NCDOL)

4 West Edenton Street
Raleigh, North Carolina 27601-1092
Bureau of Consultative Services
Telephone: (919) 807-2899
Fax: (919) 807-2902
Web site: <http://www.nclabor.com/osha/osh.htm>

Oregon

Oregon Occupational Safety and Health Division Department of Consumer & Business Services

350 Winter Street, NE, Room 430
Salem, Oregon 97310
Telephone: (503) 378-3272
Toll-free in Oregon: (800) 922-2689
Web site: <http://www.oroosha.org/>

Puerto Rico

Puerto Rico Department of Labor and Human Resources

Occupational Safety and Health Office
Department of Labor and Human Resources
20th Floor
505 Muñoz Rivera Avenue
Hato Rey, Puerto Rico 00918
Telephone: (787) 756-1100, 1106
Fax: (787) 767-6051
Web site: <http://dtrh.prstar.net/>

South Carolina

South Carolina Department of Labor, Licensing and Regulation

Office of OSHA Compliance
3600 Forest Drive
PO Box 11329
Columbia, South Carolina 29204
Telephone: (803) 734-9644
Fax: (803) 734-9772
Web site: <http://www.llr.state.sc.us/osha.asp>

Tennessee

Tennessee Department of Labor and Workforce Development

OSHA Consultative Services

Tennessee Department of Labor and Workforce
Development

710 James Robertson Parkway, 3rd Floor

Nashville, Tennessee 37243-0659

Telephone: (615) 741-7036

Fax: (615) 532-2997

Web site: <http://www.state.tn.us/labor-wfd>

Utah

Utah Labor Commission Consultation Services

160 East 300 South, 3rd Floor

Salt Lake City, Utah 84114-6650

Telephone: (801) 530-6901

Fax: (801) 530-6992

Web site: [http://www.labor.state.ut.us/Utah_
Occupational_Safety_Hea/utah_
occupational_safety_he.htm](http://www.labor.state.ut.us/Utah_Occupational_Safety_Hea/utah_occupational_safety_he.htm)

Vermont

Vermont Department of Labor and Industry Division of Occupational Safety & Health

National Life Building, Drawer 20

National Life Drive

Montpelier, Vermont 05602-3401

Telephone: (802) 828-2765

Fax: (802) 828-2748

Web site: <http://www.state.vt.us/labind/vosha.htm>

Virginia

Virginia Department of Labor and Industry

Powers-Taylor Building

13 South 13th Street

Richmond, Virginia 23219

Telephone: (804) 786-2377

Fax: (804) 371-6524

Web site: <http://doli.state.va.us/>

Virgin Islands

**Virgin Islands Department of Labor
Division of Occupational Safety and Health**
3021 Golden Rock
Christiansted, St. Croix, Virgin Island 00840
Telephone: (340) 772-1315
Fax: (340) 772-4323

Washington

Washington Department of Labor and Industries
PO Box 44001
Olympia, Washington 98504-4001
Telephone : (360) 902-4200
Fax: (360) 902-4202
Web site: <http://www.lni.wa.gov/wisha/default.htm>

Wyoming

**Wyoming Department of Employment
Workers' Safety and Compensation Division**
Cheyenne Business Center
1510 East Pershing Blvd.
Cheyenne, Wyoming 82002
Telephone: (307) 777-7786
Fax: (307) 777-3646
Web site: <http://wydoe.state.wy.us/doe.asp?ID=7>

Section XII

Key Sources Used to Prepare this Publication

- 1. Bibliography**
- 2. Websites**

1. Bibliography

Armour, S.. Employers urge workers to chill out before burning out: moves aimed at cutting turnover. *Library Personnel News*, Spring/Summer 2000, v. 13(1-2):12-13.

Bertuca, David J.. Letting go of the mouse: using alternative computer input devices to improve productivity and reduce injury. *OCLC Systems & Services*, 2001, v. 17(2):79-83.

Boss, Richard W.. Ergonomics for libraries. *Library Technology Reports*, Nov.-Dec. 2001, v. 37(6):1-65.

Brickus, L.S.R.; Moreira, J.C.; de Aquino Neto, F.R.; Siqueira, L.F.G.. Indoor air quality in a sick library in Rio de Janeiro. *Indoor Air '99 : proceedings of the 8th International Conference on Indoor Air Quality and Climate, held in Edinburgh, Scotland, 8-13 August 1999*. London : Construction Research Communications, 1999, v. 2:245-250.

Chao S.J.. Library ergonomics in literature: a selected annotated bibliography. *Collection Building*, 17 October 2001, v. 20(4):165-176.

Chao S.J.; Chang C.; Chiang B.. Planning and implementing a library ergonomics program: case study at Queens College Library, the City University of New York. *The Electronic Library*, 15 September 2001, v. 19(5):327-341.

Colley, M.; Lean, L.. Library footstools: do they have major design deficiencies? *Journal of Occupational Health and Safety : Australia and New Zealand*, August 1996, v. 12(4):477-480.

Fantuzzi, G.; Aggazzotti, G.; Righi, E.; Cavazzuti, L.; Predieri, G.; Franceschelli, A.. Indoor Air Quality in the University Libraries of Modena (Italy). *Science of the Total Environment*, v. 193(1):49-56.

James, Tamara and Philip Witt. Ergonomics in the Library. *North Carolina Libraries*, Fall 1999, v. 57(3):93-9.

Kertesz, C.J.. Bacteria scare closes Detroit Public Library main branch. *American Libraries*, October 2000, v. 31(9):18-20.

Krake, A.M.; Worthington, K.A.; Wallingford, K.M.; Martinez, K.F.. Evaluation of microbiological contamination in a museum. *Applied occupational and environmental hygiene*, August 1999, v. 14(8):499-509.

Kuepfer, T.. Windsor Public Library : injury prevention strategy. Windsor, Ont. : Occupational Health Clinics for Ontario Workers, 1993. 22 p.

Mansfield, Judith A.; Armstrong, Thomas J.. Library of Congress Workplace Ergonomics Program. *American Industrial Hygiene Association journal*, 1997, v. 58(2):138.

Osfi, B.A.. Ergonomics: human factors for librarians. *Library Administration Management*, Fall 2001, v. 15(4):252-257.

Robertson, G.. Investigating risk: assessing and analysing trouble before it strikes. *Feliciter*, 2002, v. 48(1):30-33.

Robertson, G.. Shelving and safety : an overview. *Feliciter*, February 1996, v. 42(2):33-36.

S.O.S. - stamp out stress. *School Library Workshop*, March 2002, v. 22(7):11.

Thornton, Joyce K.. Carpal tunnel syndrome in ARL libraries. *College and Research Libraries*, 1997, v. 58:9-18.

Vasi, John. Computer ergonomics for library staff and users. In: Cheryl LaGuardia (ed.). *Recreating the Academic Library: Breaking Virtual Ground*. New York: Neal-Schuman, 1998, p.107-120.

Village, J. "Ergonomic design for libraries", Vancouver, B.C.: Vancouver Public Library, 1992.

2. Websites

ErgoLib for Safer Library Computing

<http://lib.ucr.edu/ergolib/>

Librarians under siege

<http://blueprint.bluecrossmn.com/topic/librarians>

Lighting the Library

<http://www.slais.ubc.ca/resources/architecture/lighting.html>

Managing Technostress in UK Libraries: A Realistic Guide

<http://www.ariadne.ac.uk/issue25/technostress/>

Mould Issues

<http://palimpsest.stanford.edu/bytopic/mold/>

Sanitation

http://www.tworiver.lib.wi.us.health_&_safety.htm

Taking care of ergonomics: one library's experience

<http://www.cla.ca/divisions/CACUL/occpaper13.htm>

Voluntary Code of Practice for Health & Safety Issues in New Zealand Libraries

<http://www.lianza.org.nz/volcode.htm>

Workplace Health and Safety Guidelines for People Working in Libraries

<http://www.whs.qld.gov.au/guide/gde54.pdf>

Planning and Building Libraries

<http://www.slais.ubc.ca/resources/architecture/index3.html>

Publications in this series

Groundskeepers Safety Guide for groundskeepers, landscape contractors and nursery workers

Cold Weather Workers Safety Guide addresses the health and safety information needs of the outdoor worker

School Workers Health and Safety Guide for teachers, custodians, school administrators and school board officials

Office Ergonomics Safety Guide helps office workers to recognize ergonomic hazards and take remedial action

Food Service Workers Safety Guide covering all safety aspects of the food preparation and service industries

Warehouse Workers Safety Guide for workers in warehouses, storage facilities, bulk stores and the transport industry

Indoor Air Quality Health and Safety Guide addresses concerns about indoor air quality, and explains everything building occupants need to know about ensuring their health and comfort

Violence in the Workplace Prevention Guide an essential resource for anyone who wants to learn about workplace violence and its prevention

Welders Health and Safety Guide helps workers recognize hazards associated with welding work and to prevent injury and illness

Health and Safety Committees Reference Guide provides practical guidance for the formation and effective functioning of health and safety committees.

Noise Control in Industry: A Basic Guide helps workers and employers recognize noise problems, take steps to control occupational noise exposure and develop a hearing conservation program.

Wellness in the Workplace provides practical steps and program suggestions for workplace health and wellness programs. Create a wellness program or integrate one or more initiatives into your existing framework.

For more information about these titles

(905) 570-8094 or 1-800-668-4284

Fax: (905) 572-2206 E-Mail: clientservices@ccohs.ca

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When you have a question about health or safety, remember to use these FREE services offered by CCOHS:

- 1. Confidential telephone Inquiries Service
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- 2. OSH Answers on the Web
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